Ministry of Health of the Kyrgyz Republic
Kyrgyz State Medical Academy named after I.K. Akhunbaeva

«Agreed»
Human Resource Management
and organizational work
Ministry of Health of the Kyrgyz Republic
"____" _____ _____ 2021

«Approved»
Rector of KSMA named after I.K. Akhunbaeva,
MD, prof. Kudaibergenova I.O.
" ___" _____ 2021

The main professional educational program of training in clinical residency for foreign citizens

Specialty:"Traumatology and Orthopedics"

Qualification awarded: Traumatologist-orthopedist
Full-time form of education
Study period: 3 years

Bishkek - 2021

Discipline: Traumatology, Orthopedics
Type of study: Residency
Category of students - The previous level of education of a specialist is a higher medical education in the specialty "general medicine" - qualification "physician-generalist" or in the specialty "traumatology and orthopedics" - qualification "traumatologist-orthopedist".

Speciality	Traumatologist, orthopedist
Duration of training	3 years
Semester	6
Total labor intensity	230.4 credits
Total hours	6912
Lectures	276
Practical lessons	276
Practice	6072

Types of control
- monitoring the development of practical skills;
- intermediate semi-annual attestation;
- transfer exam after the end of 1 and 2 years of study;
- final state certification at the end of training.

Note: BPEP in accordance with the order of the Ministry of Health of the Kyrgyz Republic No. 691 dated 04.10.2018. "On approval of requirements for the structure of the main professional educational program of postgraduate medical education (residency) in the Kyrgyz Republic"

Training in the specialty "Traumatology, Orthopedics" is conducted at the departments: Traumatology, Orthopedics and ES, Operative Surgery and Topographic Anatomy, Bone Oncology, Osteoarticular Phthisiology, Rheumatology, Radiology, Pediatric Traumatology .

Disciplines - 76.8 credits
Practices - 75.2 credits
FSC - 1.6 credits
The total amount of training - 76.8 credits

The composition of the working group for the development of the program:

MD, prof. Dzhumabekov S.A. Atakulov N.A., Sheraliev A.A., Kurmanbaev U.A.

The development of the residency program is based on:
1. Decree of the Government of the Kyrgyz Republic No. 411 of 08.30.18 "On Amendments to the Decree of the Government of the Kyrgyz Republic" On Postgraduate Medical Education in the Kyrgyz Republic "of 31.07.2007 No. 303" Clause 15 http://www.med.kg / ru /

2. Requirements for the structure of the main professional educational program of postgraduate medical education (residency) in the Kyrgyz Republic, approved by the Order of the Ministry of Health of the Kyrgyz Republic No. 691 of 04.10. 2018 http://www.med.kg/ru/

3. The curriculum and program of the educational program of postgraduate training of a traumatologist-orthopedist approved by the Order of the Ministry of Health of the Kyrgyz Republic No. 630 of 04.09. 2018 http://www.med.kg/ru/

Considered and recommended for approval at the EMPC meeting on postgraduate and continuing medical education Protocol No.
Considered and approved at a meeting of the MEMK Protocol No.

Reviewers:

1. Doctor of Medical Sciences, Professor Anarkulov B.S. - Head of Department of Traumatology, Orthopedics and Disaster Medicine of KGMIPiPK named after S. B. Daniyarova
2. Ph.D., Acting associate professor Talipov N.O. - Assistant of the Department of Hospital Surgery with the course of operative surgery of the KSMA named after I.K. Akhunbaeva.

Working program:

compiled on the basis of	The development of the residency program is based on: 1. RofPME in the specialty: "Traumatology and Orthopedics", approved by the Ministry of Health of the Kyrgyz Republic "____" ____ 2021 No. _____
developed by	MD, prof. Dzhumabekov S.A., Atakulov N.A., Sheraliev A.A., Kurmanbaev U.A.
reviewed by	Anarkulov B.S. - Head of Department of Traumatology, Orthopedics and Disaster Medicine of KMIofAT&R named after S. B. Daniyarova MD, professor. Talipov N.O. - Assistant of the Department of Hospital Surgery with the course of operative surgery of the KSMA named after I.K. Akhunbaeva. Candidate of Medical Sciences, Acting associate professor.
discussed at the meeting	EMPC PD&CME (protocol No. from _____ 2021_y.)
approved at the meeting	MEMK (protocol No. dated _____ 2021_y.)

CONTENT

1. General Provisions

1.1. Introduction

The main professional educational program of training in clinical residency in the specialty "Traumatology and Orthopedics" qualification "Traumatologist-orthopedist" is prepared in accordance with the requirements for the structure of the basic professional educational program of postgraduate medical education in the specialties of residency, developed by the Ministry of Health of the Kyrgyz Republic in accordance with the Law "On Education » and other regulatory legal acts of the Kyrgyz Republic in the field of postgraduate medical education and approved in the manner determined by the Government of the Kyrgyz Republic.

1.2. List of normative documents in accordance with which these requirements were developed:

- Law of the Kyrgyz Republic from January 9 2005g.№ 6 "On protection of the health of citizens in the Kyrgyz Republic" About implementation of the Law of the KR, see Government Resolution dated April 3, 2006, No.226. (In the edition of the Law of the Kyrgyz Republic from December 28, 2006 N 224, February 17, 2009 N 53, April 17, 2009 N 129).
- Law of the Kyrgyz Republic dated April 30, 2003 No. 92 "On Education".
- Decree of the Government of the Kyrgyz Republic dated February 3, 2004 No. 53 "On approval of normative and legal acts regulating the activities of educational institutions of higher and secondary vocational education of the Kyrgyz Republic (as amended by the Government of the Kyrgyz Republic Resolution dated March 5, 2009 No. 148.
- Resolution of the Government of the Kyrgyz Republic dated August 30, 2018 No. 411 "On amendments to the Resolution of the Government of the Kyrgyz Republic" On postgraduate medical education in the Kyrgyz Republic "dated July 31, 2007 No. 303".
- Decree of the Government of the Kyrgyz Republic dated August 23, 2011 No. 496 On the establishment of a two-tier structure of higher professional education in the Kyrgyz Republic (as amended by decrees of the Government of the Kyrgyz Republic dated July 4, 2012 No. 472, July 22, 2014 No. 405)

Terms, definitions, designations, abbreviations

The standard curriculum and educational and professional program of training in clinical residency in the specialty "Traumatology and Orthopedics" uses terms and definitions in accordance with the Law of the Kyrgyz Republic "On Education" and international documents in

the field of higher professional education, adopted by the Kyrgyz Republic in the prescribed manner :

- requirements for the training of a specialist at the level of postgraduate medical and pharmaceutical education - a standard that determines the duration, structure, content of training, as well as the procedure for attestation and certification, approved by the authorized state body in the field of health.
- residency - is the level of specialized and advanced postgraduate training of graduates of higher medical educational institutions in accordance with the list of medical specialties approved by the authorized state body for which the residency is provided.
- competence - a dynamic combination of personal qualities, knowledge, abilities and skills necessary to engage in professional activities in the relevant field;
- catalog of competencies - a list of general and professional competencies that a resident must master by the end of the training period in residency in the chosen specialty;
- the clinical base is a healthcare organization defined by the authorized state body as a clinical base that provides training, retraining and advanced training of medical personnel and provides medical and sanitary care to patients;
- clinical mentor - a qualified medical worker of a healthcare organization responsible for the practical training of a resident;
- the main educational program - a set of educational and methodological documentation that regulates the goals, expected results, content and organization of the implementation of the educational process in the relevant direction of training;
- a module is a part of an academic discipline that has a certain logical completeness in relation to the established goals and learning outcomes;
- credit (credit) - a conditional measure of the labor intensity of the main professional educational program;
- final learning outcomes - competencies acquired as a result of training in the main educational program / module.

List of abbreviations

WHO	World health organization
BMI	Body mass index
RK	Republic of Kyrgyzstan
GP	General practice
PHC	Primary health care
FM	Family medicine
FMC	Family Medicine Center
EMD	Educational-methodical department
ECG	Electrocardiogram
BP	Blood pressure
HR	Heart rate
BR	Breathing rate

Explanatory note

The main professional program of postgraduate professional education (residency) in the specialty "Traumatology and Orthopedics" is an educational and methodological normative document regulating the content and organizational and methodological forms of training in the direction of "traumatology, orthopedics" in postgraduate professional education of doctors.

Traumatology and orthopedics are one of the main branches of clinical medicine that study injuries and diseases. The diagnosis and treatment of which use methods and techniques to

one degree or another is accompanied by a violation of the integrity of the musculoskeletal system of the body.

It is also a part of the basic disciplines that lays the foundation for the study of traumatological and orthopedic activities required by a doctor in the specialty "traumatology and orthopedics", regardless of his further specialization. Teaching traumatology, orthopedics is based on a syndromic approach to the study of the main pathological conditions in traumatology, orthopedics with the study of individual elements of traumatological activity by students. After an analytical study of general issues of traumatology, orthopedics, a synthetic study of the foundations of clinical traumatology becomes possible. The acquisition of the skills of clinical, laboratory and instrumental examination of the patient, knowledge of the main syndromes greatly facilitates the subsequent development of both traumatology, orthopedics, and other sections of clinical medicine. Particular attention is paid on the usage of the latest technologies in traumatology, orthopedics, such as minimally invasive orthopedics, endoscopic, arthroscopic interventions, modern X-ray and radioisotope research methods, and the use of ultrasound. When passing a course in the specialty of a traumatologist, an orthopedist, they master a list of practical skills that underlie the provision of emergency medical care in peacetime and in case of massive admissions of victims. This program aims to assimilate theoretical and practical basic knowledge of traumatology, orthopedics by clinical residents, the ability to think clinically, diagnose injuries and orthopedic diseases and their complications, provide emergency first aid and navigate the tactics of conservative treatment in a hospital, carry out basic preventive measures in traumatology, orthopedics, master the technique of performing basic diagnostic and therapeutic procedures.

The international training standards for "traumatologist, orthopedist" was taken into account when developing this document. As well as the fact that the duration of postgraduate training is 3 years in accordance with the Law "On Education" and other regulatory legal acts of the Kyrgyz Republic in the field of postgraduate medical education and approved in the manner determined by the Government of the Kyrgyz Republic.

The main professional educational program in the specialty "Traumatology and Orthopedics" has the following structure: an explanatory note, goals and objectives of training in residency, qualification requirements for the level of training of a resident who completed training in traumatology, orthopedics (requirements for knowledge, skills and abilities according to the catalog of competence) , a minimum of the content of the educational program, a typical curriculum, a curriculum of disciplines, clinical bases and periods of passage, literature for mastering the curriculum, as well as general clinical disciplines (related and fundamental) and optional disciplines (humanitarian and educational block, elective courses in specialties) , attestations (final state attestation, transfer and semi-annual).

1.3. General characteristics of the specialty.

Training in the residency program is allowed in educational organizations that have an appropriate license to carry out educational activities and in health care organizations accredited as clinical bases.

Definition of the discipline "traumatology, orthopedics".

Traumatology and orthopedics are one of the main branches of clinical medicine that study injuries and diseases. The diagnosis and treatment of which use methods and techniques to one degree or another is accompanied by a violation of the integrity of the musculoskeletal system of the body.

1.3.1 Purpose and objectives.

Purpose of training: The purpose of training a resident in the specialty "Traumatology and Orthopedics" is to train a qualified traumatologist-orthopedist with a system of general cultural and professional competencies, capable and ready for independent professional activities in specialized, including high-tech medical care.

Tasks:

1. Purposefully find out the patient's complaints and the history of the development of the disease;
2. Conduct a physical examination of a traumatological and orthopedic patient (examination, palpation, percussion, auscultation);
3. Outline a plan of examination of a traumatological, orthopedic patient;
4. To organize traumatological activities in compliance with the rules of asepsis in the premises of the traumatological, orthopedic hospital and polyclinic, in the intensive care and intensive care units;
5. Provide first aid;
6. Perform medical diagnostic and therapeutic procedures;
7. Determine the main traumatological and orthopedic syndromes and diagnose the main types of orthopedic diseases.
8. To develop independent clinical thinking aimed at the effective use of the knowledge gained in the provision of timely, qualified medical care to patients with injuries and orthopedic diseases.
9. Formation of the competence of a traumatologist, orthopedist in the field of his professional activity.
10. Formation of skills and abilities in mastering the latest technologies and techniques in the field of professional activity;
11. Provide a basic level of humanitarian knowledge and teach the basics of the practical application of medical informatics, medical pedagogy and psychology, provide an opportunity to master a foreign language.

1.3.2. Labor intensity of the residency program of training in the specialty "Traumatologist, orthopedist".

The total workload of the discipline "Traumatology, Orthopedics" is 230.4 credit hours:

1. 1st year of study program "Traumatology, Orthopedics" 76.8 credit hours.
2. 2nd year of study program "Traumatology, Orthopedics" 76.8 credit hours.
3. 3rd year of study program "Traumatology, Orthopedics" 76.8 credit hours.

The training is carried out in a full-time form. The volume of the residency program implemented in one academic year is 76.8 credit units / credits or 2304 hours / year and, accordingly, 230.4 credits, 6912 hours over 3 years.

The term of training of the residency **program** in the specialty "Traumatologist-orthopedist", including vacations, regardless of the educational technologies used, is at least 3 years.

After successfully completing and passing the final state certification, the graduates of the residency are issued a certificate of the established form with the qualification **"Traumatologist-orthopedist".**

1.3.3. Requirements for the selection of candidates for residency training in the specialty "Traumatologist, orthopedist".

Admission to residency is carried out on a general basis in accordance with the "Regulations on residency" approved by the Resolution of the Government of the Kyrgyz

Republic of 11.12.2017 No. 798 "On Amendments to the Resolution of the Government of the Kyrgyz Republic" On Postgraduate Medical Education in the Kyrgyz Republic "dated 31.07.2007 No. 303.

For admission to residency in the specialty "Traumatologist, orthopedist", it is necessary to have a diploma of basic medical education in the specialties "General Medicine".

The number of places in residency is determined annually in accordance with the needs of practical health care and the capabilities of clinical bases to provide high-quality practical training and is approved by the order of the Ministry of Health of the Kyrgyz Republic.

Admission to clinical residency in the specialty "Traumatologist, orthopedist" is carried out on a competitive basis based on the results of entrance examinations. The previous level of education of a specialist is a higher medical education in the specialty "general medicine" - the qualification "doctor-general practitioner".

The requirements for the assessment of knowledge and skills entering the clinical residency must comply with the requirements of the State Standard of Higher Professional Education and Postgraduate Education. The form of the assessment of knowledge and skills is determined by the Institute of Postgraduate Studies (or university).

Practitioners who have completed postgraduate training in another clinical specialty may also apply for residency. If the training programs coincide, the terms of training in residency in the specialty "Traumatologist, orthopedist" are reduced by the decision of the department in the volume of the curriculum that was mastered during the internship in a narrow specialty and approved by the order of the rector of the medical educational organization.

1.3.4. The area of professional activity of graduates of residency in the specialty "Traumatologist, orthopedist".

The area of professional activity of graduates of residency in the specialty "Traumatology and Orthopedics" includes the protection of the health of citizens by providing qualified medical care in accordance with the established national standards for the provision of services based on evidence-based medicine (Clinical guidelines and clinical protocols).

1.3.5. The objects of professional activity of graduates of residency in the specialty "Traumatologist-orthopedist".

The objects of professional activity of graduates of residency in the specialty "Traumatologist-orthopedist" are: individuals (patients) aged 15 to 18 years (hereinafter - adolescents) and over the age of 18 years (hereinafter - adults); population; a set of tools and technologies aimed at creating conditions for protecting the health of citizens.

1.3.6. Professional activities of graduates of residency in the specialty "Traumatologist-orthopedist".

Graduates who have mastered the residency program in the discipline "Traumatology, orthopedics" are trained for the following types of professional activities:

- diagnostic;
- medical;
- preventive
- rehabilitation;
- psychological and pedagogical;
- organizational and managerial.

Doctor traumatologist, orthopedist who has mastered the program, must have the following professional competences:

Preventive activities:

Readiness to implement a set of measures aimed at maintaining and strengthening health and including the formation of a healthy lifestyle, prevention of the onset and (or) spread of diseases, their early diagnosis, identification of the causes and conditions of their occurrence and development, as well as aimed at eliminating harmful effects on human health of the factors of his habitat (PC-1);

Willingness to carry out preventive medical examinations, clinical examination and dispensary observation of healthy and chronic patients (PC-2);

Readiness to carry out anti-epidemic measures, to organize the protection of the population in the centers of especially dangerous infections, in the event of a worsening radiation situation, natural disasters and other emergencies (PC-3);

Readiness to use social and hygienic methods for collecting and medical and statistical analysis of information on the health indicators of adults and adolescents (PC-4);

Diagnostic activity:

Readiness to identify pathological conditions, symptoms, disease syndromes, nosological forms in patients in accordance with the International Statistical Classification of Diseases and Problems Related to Health (PC-5);

Medical activity:

Readiness for the management and treatment of patients requiring the provision of traumatological and orthopedic medical care (PC-6);

Readiness to provide medical assistance in emergency situations, including participation in medical evacuation (PC-7);

Rehabilitation activities:

Readiness to use natural healing factors, drug, non-drug therapy and other methods in patients in need of medical rehabilitation and spa treatment (PC-8);

Psychological and pedagogical activity:

Willingness to form motivation among the population, patients and members of their families, aimed at maintaining and strengthening their health and the health of others (PC-9);

Organizational and managerial activities:

Readiness to apply the basic principles of organization and management in the field of public health protection, in medical organizations and their structural units (PC-10);

Willingness to participate in assessing the quality of medical care using the main medical and statistical indicators (PC-11);

Readiness to organize medical assistance in emergency situations, including medical evacuation (PC-12).

2. Requirements for the final results of training of graduates of residency in the specialty "Traumatologist-orthopedist".

The final learning outcomes of a graduate who has mastered the residency program in the specialty "traumatologist-orthopedist" by the end of the training period must have universal (UC) and professional (PC) competencies, which are described in the catalog of competencies in the specialty "Traumatologist-orthopedist" for the postgraduate level (Chapter 3).

The universal competences (UC) of the Orthopedic Traumatologist are characterized by:

- Readiness for abstract thinking, analysis, synthesis (UC-1).
- Willingness to manage a team, tolerantly perceive social, ethnic, confessional and cultural differences (UC-2).

- Willingness to participate in pedagogical activities in programs of secondary and higher medical education or secondary and higher pharmaceutical education, as well as in additional professional programs for persons with secondary vocational or higher education in the manner established by the main executive body performing the functions of developing state policy and health regulation (UC-3).

Professional competences (PC) of the "Traumatologist-orthopedist" are characterized by:

In preventive activities (PC-1,2,3,4):

- Readiness to implement a set of measures aimed at maintaining and strengthening health and including the formation of a healthy lifestyle, prevention of the onset and (or) spread of diseases, their early diagnosis, identification of the causes and conditions of their occurrence and development, as well as aimed at eliminating harmful effects on human health of the factors of his environment (PC-1).
- Readiness to carry out preventive medical examinations, clinical examination and dispensary observation of healthy and chronic patients (PC-2).
- Readiness to carry out anti-epidemic measures, organize protection of the population in the centers of especially dangerous infections, in case of deterioration of the radiation situation, natural disasters and other emergencies (PC-3).
- Readiness to use social and hygienic methods for collecting and medical and statistical analysis of information on the health indicators of adults and adolescents (PC-4).

In diagnostic activity (PC-5):

- Readiness to determine in patients injuries and pathological conditions, symptoms and syndromes of diseases of the musculoskeletal system and musculoskeletal system, nosological forms in accordance with the International Statistical Classification of Diseases and Problems Related to Health.
- Readiness to make a diagnosis based on a diagnostic study in the field of traumatology, orthopedics.
- Readiness for differential diagnosis of injuries and diseases based on diagnostic research in the field of traumatology, orthopedics.
- Willingness to analyze the patterns of functioning of individual organs and systems, to use knowledge of the anatomical and physiological foundations, the main methods of clinical and immunological examination and assessment of the functional state of the patient's body for the timely diagnosis of a group with injuries and diseases of the musculoskeletal system.

In medical activities (PC-6, PC-7):

- Willingness to carry out the main therapeutic measures in patients with injuries and orthopedic diseases of one or another group of nosological forms that can cause severe complications and (or) death (PC-6);
- Timely identify life-threatening disorders of internal organs, use methods of their immediate elimination, take anti-shock measures;
- Willingness to prescribe adequate treatment to traumatological, orthopedic patients in accordance with the diagnosis, to implement the algorithm for choosing drug and non-drug therapy for specialized patients;

- Readiness to provide medical assistance in emergency situations, including participation in medical evacuation (PC-7).

In rehabilitation activities (PC-8):

- Readiness for the use of natural healing factors, drug, non-drug therapy and other methods in patients in need of medical rehabilitation and spa treatment.
- Willingness to apply various rehabilitation measures (medical, social, psychological) for the most common diseases of the musculoskeletal system;
- Willingness to give recommendations on the choice of the optimal regimen during the rehabilitation of traumatological and orthopedic patients (physical activity depending on the morphological and functional status), to determine the indications and contraindications for the appointment of physiotherapy exercises, physiotherapy, reflexology.

In psychological and pedagogical activity (PC-9):

- Willingness to form motivation among the population, patients and their families, aimed at maintaining and strengthening their health and the health of others (PC-9).

In organizational and managerial activities (PC-10,11,12):

- Willingness to use regulatory documents adopted in health care (laws of the Kyrgyz Republic, technical regulations, international and national standards, orders, recommendations, the international system of units (SI), current international classifications), as well as documentation for assessing the quality and efficiency of medical organizations of trauma and orthopedic profile (PC-10).
- Willingness to use knowledge of the organizational structure of trauma and orthopedic profile, management and economic activities of medical organizations of various types for the provision of medical care, to analyze the performance of their structural units, to assess the effectiveness of modern medical-organizational and socio-economic technologies in the provision of medical services to patients with injuries and orthopedic diseases of the musculoskeletal system (PC-11).
- Readiness to organize medical assistance in emergency situations, including medical evacuation (PC-12).

The student's competencies, formed as a result of mastering the discipline :

GSC (General scientific competence)	• Constantly improve qualifications at his professional activities; • Think critically about specialized health information and its sources and take it into account when making decisions; • Inform and support patients, medical students, other doctors, government officials and other people who are actively concerned with their health in their actions to learn; • Promote the development, dissemination and implementation of new knowledge and methods.

IC (Instrumental Competence)	• Be proficient in computer: confident user of MS Office, exel, work with websites, electronic library "medical statistics", • Registration of medical reporting documentation on a computer, entering data into an electronic database • Self-conduct of an express method for determining blood glucose levels using a glucometer and interpretation of their results • Independent implementation of the method for determining impairment of types of sensitivity in diabetic neuropathy and assessment of their results • Measuring blood pressure using a sphygmomanometer • Measurement of weight and height, calculation of BMI and interpretation • Conducting and basic decoding of an ECG • Conducting Peak Flowmetry and Data Evaluation • Pulse Oximetry and Data Evaluation • Aerosol inhalation using a spacer, nebulizer • Taking sputum for cytology and 2-fold bacterioscopy of the office • Interpretation of the results of basic instrumental studies (X-ray, ultrasound, Echo KG, EGDS, F of ER) • An automated external defibrillator (AED) skill • Defibrillation skill with the AED • The skill of combining mechanical ventilation and cardiac massage during basic resuscitation
SPC (Socio-personal and general cultural competences)	**Communication competencies (Communication skills):** • Build trusting relationships with patients, their families and other close relatives; • Conduct an interview with a patient competently and correctly; • Receive important information from patients and their environment, discuss it and convey elements of the knowledge gained, taking into account the patient's situation; • Inform the patient about the risks and benefits of diagnostic and treatment measures and obtain informed consent; • Make a decision regarding incapacitated and underage patients about diagnostic and therapeutic procedures, discussing these procedures with the relevant representatives of these patient groups; • Document the information received during consultations / home visits and transmit it within the required time frame; • Empathize with bad news and responsibly report complications and mistakes. **Collaboration skills (in a team):** • Collaborate with other professionals and experts from other professional groups, with nurses, especially in the provision of long-term care for patients with chronic noncommunicable diseases; • Recognize differences of interest, accept different opinions, and

	avoid and resolve conflicts through cooperation. **Management skills (manager):** • Successfully manage professional activities and take on management tasks corresponding to the professional position; • Find a balance between professional and private activities; • Effectively use limited health care resources for the benefit of the patient, taking into account efficiency, adequacy and economy; • Evaluate and use relevant information for patient care; • Ensure and improve the quality of care and patient safety.
PC (Professional Competence)	**<u>In preventive activities (PC-1,2,3,4)</u>** • Readiness to implement a set of measures aimed at maintaining and strengthening health and including the formation of a healthy lifestyle, prevention of the onset and (or) spread of diseases, their early diagnosis, identification of the causes and conditions of their occurrence and development, as well as aimed at eliminating harmful effects on human health of the factors of his environment (PC-1). • Readiness to carry out preventive medical examinations, clinical examination and dispensary observation of healthy and chronic patients (PC-2). • Readiness to carry out anti-epidemic measures, organize protection of the population in the centers of especially dangerous infections, in case of deterioration of the radiation situation, natural disasters and other emergencies (PC-3). • Readiness to use social and hygienic methods for collecting and medical and statistical analysis of information on the health indicators of adults and adolescents (PC-4). **In diagnostic activity (PC-5):** • Readiness to identify pathological conditions, symptoms, disease syndromes, nosological forms in patients in accordance with the International Statistical Classification of Diseases and Problems Related to Health. • Readiness to make a diagnosis based on a diagnostic study in all branches of internal medicine. • Readiness for differential diagnosis of diseases based on diagnostic studies in the field of internal medicine. • Willingness to analyze the patterns of functioning of individual organs and systems, to use knowledge of the anatomical and physiological foundations, the main methods of clinical and immunological examination and assessment of the functional state of the patient's body for the timely diagnosis of a group of diseases of internal organs.

	In medical activities (PC-6, PC-7): • Willingness to carry out the main therapeutic measures in patients with injuries and orthopedic diseases of one or another group of nosological forms that can cause severe complications and (or) death (PC-6); • Timely identify life-threatening disorders of internal organs, use methods of their immediate elimination, take anti-shock measures; • Willingness to prescribe adequate treatment to traumatological and orthopedic patients in accordance with the diagnosis, to implement the algorithm for choosing drug and non-drug therapy for specialized patients; • Readiness to provide medical assistance in emergency situations, including participation in medical evacuation (PC-7). **In rehabilitation activities (PC-8):** • Readiness for the use of natural healing factors, drug, non-drug therapy and other methods in patients in need of medical rehabilitation and spa treatment (PC-8). • Willingness to apply various rehabilitation measures (medical, social, psychological) for the most common pathological conditions and damage to the body; • Willingness to give recommendations on the choice of the optimal regimen during the rehabilitation of traumatological and orthopedic patients (physical activity depending on the morphological and functional status), to determine the indications and contraindications for the appointment of physiotherapy exercises, physiotherapy, reflexology. **In psychological and pedagogical activity (PC-9):** • Willingness to form motivation among the population, patients and their families, aimed at maintaining and strengthening their health and the health of others (PC-9). **In organizational and management activities (PC- 10,11,12):** • Willingness to use regulatory documents adopted in healthcare (laws of the Kyrgyz Republic, technical regulations, international and national standards, orders, recommendations, the international system of units (SU), current international classifications), as well as documentation for assessing the quality and efficiency of the work of medical organizations with a therapeutic profile (PC-10) • Willingness to use knowledge of the organizational structure of traumatological and orthopedic profiles, managerial and economic activities of medical organizations of various types in the provision of medical care, to analyze

	the performance of their structural units, to assess the effectiveness of modern medical-organizational and socio-economic technologies in the provision of medical services to patients with various diseases internal diseases (PC-11). • Readiness to organize medical assistance in emergency situations, including medical evacuation (PC-12).

The list of planned learning outcomes in the discipline, correlated with the planned results of mastering the educational program

The study of this academic discipline is aimed at developing the following general cultural (GC), general professional (GPC) and professional (PC) competencies in students:

No.	Code	Content of competence	As a result of studying the academic discipline, students must:		
			Know	Be able to	Possess
1	GPC-1	The ability and willingness to analyze socially significant problems and processes, use in practice the methods of humanitarian, natural scientific, biomedical and clinical sciences in various types of professional activities of a specialist	Socially significant problems and processes of humanitarian, natural scientific, biomedical and clinical sciences in various types of professional activities of a specialist	Analyze the problems and processes of humanitarian, natural scientific, biomedical and clinical sciences and used in practice in various types of professional activities of a specialist	Methods for analyzing socially significant problems and processes in the humanities, natural sciences, biomedical and clinical sciences in various types of professional activities of a specialist
2	GPC-2	Ability and readiness for logical and reasoned analysis, public speech, discussion and polemics, editing texts of professional content, the implementation of educational and	The basics of logical and reasoned analysis, conducting a public speech, discussion and polemics, the basics of editing texts of professional content, the basics of educational and pedagogical activities, the basics of cooperation and	Logically argue and analyze, public speech, conduct discussions and polemics, edit texts of professional content, carry out educational and pedagogical activities,	Methods of logical and reasoned analysis, methods of public speech, skills for conducting discussions and polemics, editing professional texts, skills for educational and pedagogical

		pedagogical activities, cooperation and conflict resolution, towards tolerance;	conflict resolution and tolerance;	cooperate and resolve conflicts, be tolerant;	activities, cooperation and conflict resolution, tolerance
3	GPC-3	The ability and willingness to use management methods, organize the work of performers, find and make responsible management decisions in conditions of different opinions and within the framework of their professional competence - a specialist	Fundamentals of management methods and organization of the work of performers, the basis for making responsible management decisions in conditions of different opinions and within the framework of their professional competence - a specialist	Use management methods, organize the work of performers, find and make responsible management decisions in conditions of different opinions and within the framework of their professional competence - a specialist	Skills to use management methods, skills of organizing the work of performers, finding and making responsible managerial decisions in conditions of different opinions and within the framework of their professional competence - a specialist
4	GPC-4	The ability and willingness to carry out their activities, taking into account the moral and legal norms adopted in society, to comply with the rules of medical ethics, laws and regulations on working with confidential information, to maintain medical secrecy.	The foundations of moral and legal norms adopted in society, compliance with the rules of medical ethics, laws and regulations on working with confidential information, the basics of maintaining medical secrecy	Carry out their activities taking into account the moral and legal norms accepted in society, observe the rules of medical ethics, laws and regulations on working with confidential information, keep medical secrets	Methods and skills of implementation in their activities, taking into account the moral and legal norms adopted in society, compliance with the rules of medical ethics, laws and regulations on working with confidential information, preservation of medical secrecy
5	UC-1	Readiness for abstract thinking, analysis, synthesis	Fundamentals of abstract thinking, analysis, synthesis	Abstractly think, analyze, synthesize	Abstract thinking, analysis, synthesis
6	UC-2	Willingness to manage a team, tolerantly perceive social, ethnic, confessional and cultural differences	Fundamentals of team management, tolerant perception of social, ethnic, confessional and cultural differences	Lead a team, tolerate social, ethnic, confessional and cultural differences	Methods and skills of team management, tolerant perception of social, ethnic, confessional and cultural differences
		Preventive activities			

1	PC-1	Readiness for implementation complex events, aimed at preservation and strengthening health and including in myself shaping healthy way life, warning and (or) spreading diseases, their early diagnostics, identifying the reasons and their conditions occurrence and development as well aimed at elimination harmful influence on health human factors his environment a habitat	Fundamentals of primary prevention and sanitary educational work	To make a plan of preventive activities	Skills to work with groups at risk
2	PC-2	Readiness for holding preventive medical inspections, clinical examination and implementation dispensary observation of healthy and chronic patients with traumatological and orthopedic pathology	The main questions in surgery, laboratory and instrumental diagnostics surgical diseases, treatment methods trauma and orthopedic pathology, incl. diagnostics and treatment urgent conditions in medicine	Identify specific anamnestic features, to define character and severity individual symptoms, make out accounting and reporting documentation	The ability to compare those identified with objective examination signs with clinical and laboratory examination data, results of ultrasound, X-ray, radionuclide examination

3	PC-3	Readiness for holding anti-epidemic measures, organization protection of the population especially in the outbreaks dangerous infections when worsening radiation setting, spontaneous disasters and other emergency situations	The basics epidemiology; peculiarities epidemic process; basics organization radiobiological protection, population; basics organization medical emergency services	Organize anti-epidemic measures, regime-restrictive activity,	The concept of quality and effectiveness of preventive x events, a system for registering traumatological and orthopedic patients
4	PC-4	Readiness for application socially hygienic collection methods and medico-statistical analysis information O indicators health of adults and adolescents	The basics medical statistics, accounting and analysis major indicators health population, fundamentals medical insurance and activities medical institutions in conditions insurance medicine	Collect and medico-statistical analysis of information on population health indicators different age sex groups, nature of studying their state of health	Methods of social and hygienic monitoring, methods of statistical evaluation of data
		Diagnostic activity			
1	PC-5	Readiness for definition by patients pathological states, symptoms, syndromes diseases, nosological forms in According to The international Classification of	Semiotics Surgical diseases, diagnostic criteria, basics interpretations data laboratory instrumental examination with taking into account modern perceptions of	Interpret Laboratory and instrumental research data, calculate accepted in traumatology, orthopedics indices, Child-Pugh, etc.)	The skills of examining a patient with various traumatological, orthopedic pathologies

		surgical diseases and problems, health-related	pathology in traumatology, orthopedics, basics international classification diseases, clinical recommendations leading communities of doctors of different specialties		
		Medical activity:			
1	PC-6	Readiness for maintenance and treatment patients, needing rendering in case of emergency traumatological conditions before hospital care	Etiology, pathogenesis and clinic of major traumatological, orthopedic diseases, methods diagnostics pathology of internal organs, including laboratory (hormonal, biochemical research, clinico-laboratory methods, enzyme immunoassay, high performance liquid chromatography), instrumental (ultrasound, ECG), X-ray (incl. radioisotope, CT, MRT), peculiarities organizations and content qualified assistance patients with traumatological, orthopedic pathology	Define testimony and expediency conducting ultrasound, radioisotope, visualizing research (CT, MRT), choose an adequate algorithm for the examination and treatment of traumatological, orthopedic sick	Skills in diagnosing and treating traumatological, orthopedic diseases, methods of monitoring therapy
2	PC-7	Readiness for providing urgent medical	Etiology, pathogenesis, clinical picture	Conduct differential diagnosis of urgent	Skills in diagnosing and treating emergencies

		care for patients with traumatological, orthopedic pathology emergency situations, participation in medical evacuation	urgent states in traumatology, orthopedics surgery, methods diagnostics and treatment	states, render urgent help, incl. v emergency situations	
		Rehabilitation activities			
1	PC-8	Readiness for application natural medical factors non-drug therapy, herbal medicine and other methods in patients, needing medical rehabilitation and sanatorium resort treatment	The basics rehabilitation and balneology, the foundations of a common pathology human, immunobiology and reactivity organism	Select treatment and rehabilitation institution, equipped with necessary complex rehabilitation events, appropriate disease; choose additional methods non-drug therapy	Knowledge of non-drug therapy, methods of rehabilitation for traumatological, orthopedic diseases, techniques and their use in clinical practice
		Psychological and pedagogical activity			
1	PC-9	Readiness for formation of population, patients and their family members motivation, aimed at preservation and strengthening its health and health surrounding	Fundamentals of primary and secondary prevention diseases and sanitary educational work	Conduct systematic education, including familiarization with theoretical the basics of various pathologies of internal organs, teaching methods prevention of complications, promotion of the correct lifestyle	Fundamentals of pedagogy, communication skills and interacting with patients and their families
		Organizational and managerial activities			
1	PC-10	Readiness for application major principles organizations and management in sphere	The basics Health care legislation and policy the documents, defining activity	Organize in medical organizations and their structural divisions favorable	Experience in managerial work, experience in distributing the duties of staff in time and place, monitoring the

		health care, medical organizations and their structural divisions	bodies and institutions health care	conditions for stay patients and labor activities medical staff	fulfillment of these duties
2	PC-11	Readiness for participation in the evaluation quality of delivery medical help with using major medical statistical indicators	Modern perceptions of quality and defect rendering medical help, legislative acts of the Kyrgyz Republic in standard peer review	Define right of choice medical technologies, degree achievements planned the result	Knowledge of non-drug therapy, methods rehabilitation for traumatological, orthopedic diseases, techniques and their use in clinical practice of a traumatologist, orthopedist
3	PC-12	Readiness for Providing medical help with emergency situations, incl. participation in medical evacuation	The basics organizations and tactics specialized units medical service in emergency situations, hostilities	Organize effective medical sorting of sick and wounded	Providing planned and emergency care

3. Qualification requirements for the level of training of a resident who completed training in the specialty "Traumatologist-orthopedist" (requirements for knowledge, skills and abilities, catalog of competence).

In accordance with the educational requirements for the specialty "Traumatologist-orthopedist", a specialist who has completed training in residency must know, be able to and have practical skills:

An orthopedic traumatologist should know:

- legislative acts of the Kyrgyz Republic on the protection of the health of citizens;

- regulatory legal documents governing the activities of healthcare organizations;
- fundamentals of health care legislation (health care financing, health insurance, the role of a traumatologist, orthopedist in the structure of health insurance).
- general issues of organizing trauma care for the population, the work of medical institutions;
- regulations governing the activities of a traumatologist;
- general, functional, instrumental and other special examination methods;
- issues of asepsis and antiseptics in surgery; principles, techniques and methods of pain relief in surgery, issues of intensive care and resuscitation in adults and children;

- fundamentals of pharmacotherapy, including general and local use of antibiotics, hormone therapy; fundamentals of immunobiology, microbiology; fundamentals of radiology and radiology;
- clinical symptomatology of major surgical diseases in adults and children, their prevention, diagnosis and treatment; clinical symptoms of "borderline" diseases in a surgical clinic (urology, obstetrics and gynecology, pediatrics, infectious diseases);
- principles of preparing patients (adults and children) for surgery and postoperative management;
- issues of temporary and permanent disability, clinical examination and rehabilitation of surgical patients;
- the use of physiotherapy, physiotherapy exercises;
- indications and contraindications for spa treatment;
- labor protection rules when working with equipment and surgical instruments;
- the basics of rational nutrition, the principles of diet therapy in surgical patients during preoperative preparation and in the postoperative period;
- equipping intensive care operating rooms; surgical instruments used in various surgical operations;
- principles of organizing and conducting medical examination of the population; economic issues of the surgical service;

A traumatologist-orthopedist must be able to:

- draw up medical documentation for the admission and discharge of patients.
- conduct clinical, outpatient, polyclinic examination of patients with injuries and diseases of the musculoskeletal system .
- obtain information about the disease, apply objective methods of examining the patient, identify general and specific signs of a surgical disease, especially in cases requiring urgent care or intensive therapy;
- assess the severity of the patient's condition and take the necessary measures to remove the patient from this condition, determine the volume and sequence of resuscitation measures;
- provide the necessary urgent first aid (artificial respiration, heart massage, immobilization of the limb in case of fracture, stopping bleeding, dressing and tamponade of the wound, gastric lavage in case of poisoning, urgent tracheostomy in case of asphyxia);
- determine the need for special research methods (laboratory, radiological, functional, endoscopic, etc.), organize their implementation and give the correct interpretation of the results;
- determine the indications for hospitalization, organize it in accordance with the patient's condition;
- carry out differential diagnostics of the main injuries and diseases of the musculoskeletal system diseases in adults and children, to substantiate the clinical diagnosis;
- substantiate the scheme, plan and tactics of patient management, indications and contraindications for surgery;
- develop a plan for preparing a patient for an emergency or planned surgery, determine the degree of homeostasis disorders, prepare all functional systems of the patient's body for surgery;
- determine the blood group, conduct compatibility tests and perform intravenous or intra-arterial blood transfusion, identify possible transfusion reactions and complications and fight them;
- substantiate the most expedient tactics of surgery in case of pathology and perform it in the required volume;
- substantiate the method of pain relief and, if necessary, perform it;

- develop a scheme of postoperative patient management and prevention of postoperative complications;
- resolve the issue of the patient's ability to work;
- draw up all the necessary medical documentation provided for by healthcare legislation;
- carry out sanitary and educational work with the population and the sick;
- draw up a report on their work and analyze its effectiveness.
- carry out the correct execution of documentation of outpatient and inpatient traumatological institutions, drawing up an annual report on the work according to the report forms and on their work; preventive and sanitary-educational work among the population;
- conduct educational sessions with patients, teach self-control methods

At the end of the training, a resident specializing in "traumatologist-orthopedist" must independently master the following manipulations (according to the catalog of competencies, chapter 3.6):

The orthopedic traumatologist must know how to:

- Determine the presence of a fracture or dislocation based on clinical signs
- Diagnose typical congenital (congenital dislocation of the hip, clubfoot, torticollis, syndactyly) and acquired (scoliosis, deforming arthrosis, osteochondrosis, deformity of the feet) orthopedic diseases
- Anesthetize the fracture site of the diaphysis of long tubular bones
- For open fractures, temporarily stop bleeding (including the imposition of a hemostatic tourniquet, clamp, ligature, pressure bandage)
- Carry out transport immobilization in case of damage to the musculoskeletal system
- Apply a typical plaster cast splint over the distal upper and lower extremities
- Assess the condition of the limb in a plaster cast
- Remove the plaster cast in case of a threatened limb
- Give the correct position to a patient with injuries of the pelvis, spine, chest, large joints in bed
- Place the limb on a therapeutic splint when treating fractures using skeletal traction
- Remove skeletal traction
- Examine a patient with isolated injury and polytrauma. Outline a plan and sequence of treatment measures depending on the identified injuries
- Determine the prognosis, stages and terms of treatment in each individual case of common orthopedic diseases and injuries of the musculoskeletal system
- Perform conduction anesthesia for rib fractures
- Make a blockade according to the Shkolnikov method for pelvic fractures
- Perform anesthesia and reposition for fractures of the clavicle, long bones
- Perform a diagnostic and treatment puncture of the knee and shoulder joints
- Reduction of dislocations (fresh, uncomplicated) of the upper and lower extremities
- Perform primary surgical treatment of soft tissue wounds without damaging blood vessels and nerves
- Apply plaster casts - langet-circular, "fenestrated" on the upper and lower extremities
- Apply skeletal traction for the calcaneus. tuberosity and lower metaphysis of the tibia, olecranon
- Assess the position of bone fragments and be able to correct them during treatment with skeletal traction and in a plaster cast
- Provide emergency medical care for the syndrome of prolonged compression

- Based on clinical data and radiographs, determine the presence of union of fractures
- Reveal long-term non-union of fractures and the presence of a "pseudarthrosis"
- Intramedular osteosynthesis of the shoulder, forearm and hip bones
- Osteosynthesis with the Ilizarov apparatus for closed and open fractures of long bones
- Long bone osteotomy
- Osteosynthesis of the clavicle, popliteal, ankle, shoulder epicondyle
- Arthrotomy, Meniscoetomy, Synovectomy
- Muscle stitching, myolysis and tenolysis. myotomy and tenotomy, fasciotomy
- Tendon plastics
- Skin plastic. For closing the wound surface with fresh wounds, granulating wound surfaces after skin burns.
- Filling out and maintaining a medical record of an inpatient patient, drawing up an extract from a medical record
- Filling out and maintaining medical records in a polyclinic: an outpatient's medical card, a statistical coupon, a certificate of incapacity for work, referrals to hospitalization, a health resort card and others
- Justify the indications for referring the patient to Medical and Social Expert Commission and filling out a special card

A "traumatologist-orthopedist" must be able to independently diagnose and provide emergency care at the pre-hospital stage, as well as determine the tactics of providing further medical care in the following emergency conditions:

- Possession of resuscitation measures (basic cardiopulmonary resuscitation: mouth-to-mouth, mouth-to-nose artificial respiration, cleaning of the upper respiratory tract, chest compressions, tracheal intubation, defibrillation). Reception of Heimlich. Safar's triple reception. Emergency help for acute disturbances of consciousness and coma. Ensuring a safe position for the patient to prevent aspiration.

Provide emergency assistance for the following emergency conditions:

- Anaphylactic shock in diseases of the gastrointestinal tract
- Urticaria and Quincke's edema in diseases of the gastrointestinal tract
- Hepatic coma by severity of conditions
- Hepatic colic
- Acute Abdominal Pain / Acute Abdomen
- Dislocated joints
- Acute appendicitis
- Acute pancreatitis
- Gastrointestinal bleeding
- Perforated stomach and duodenal ulcer
- Acute intestinal obstruction
- Acute liver failure
- Hypovolemic shock in various surgical diseases
- Acute respiratory failure in surgical diseases of the gastrointestinal tract
- Pulmonary edema, cardiac asthma in surgical diseases
- Hypertensive crisis.
- External bleeding
- Acute coronary syndrome.
- Acute disorders of cerebral circulation in adults

- Pulmonary embolism.

4. Requirements for the structure and content of the residency program in the specialty "Traumatologist-orthopedist"

4.1. The minimum content of the educational program.

The educational program of higher education in the specialty "Traumatologist, orthopedist" includes: a compulsory part (basic), and a part formed at the choice of the resident (variable).

The residency program consists of the following blocks:

- Theoretical training (disciplines and modules) constituting no more than 10%, including the basic and variable part;
- Practical training is at least 90%,
- State final certification, which is fully related to the basic part of the program and ends with the qualification "Traumatologist-orthopedist"

The volume of mastering the components of the educational program of PGME in the specialty "Doctor - traumatologist, orthopedist" is from the total volume of hours: - general clinical disciplines - 20%; - clinical discipline in narrow profile specialization - not less than 70%; - humanitarian and general education block (optional disciplines) - up to 10%.

Labor intensity of the development of the educational program of the educational program of postgraduate training in the specialty "Physician traumatologist-orthopedist

No.	Names of sections and disciplines	Volumes assimilation %	Laborious bone acad. hour.	Laborious bone credit hour.	Total weeks
1	**Educational program**		**6624**	**220.8**	**138**
1.1.	General clinical disciplines (related and fundamental)	20%	1056	35.2	22
1.2.	Special discipline	70%	5136	171.2	107
1.3.	Optional disciplines (humanitarian and general education block)	10%	432	14.4	9
2	**Approvals** (final state certification, transfer, semi-annual)		**288**	**9.6**	**6**
	Preparation volume *		**6912**	**203.4**	**144**
3	**Holidays**		**-**	**-**	**8**
	Total	**100%**	**6912**	**203.4**	**152**

Note:

- One (1) credit hour corresponds to 30 academic hours of 45 minutes. The maximum study load of a resident, including all types of classroom and extracurricular work, is 48 academic hours per week or 36 astronomical hours (6 days 6 hours a day).

- Elective disciplines are chosen by resident from those offered by an educational or scientific organization implementing an educational program of postgraduate education.
- *Excluding vacations. Vacation is 8 weeks (based on 4 weeks per year, in the month of August)

The volume of the residency program implemented in one academic year is 52 weeks with one-year training, including:

- training - 46 weeks (classroom studies, clinical practice and independent work)
- certification - 2 weeks (half-year, transfer or final)
- vacation - 4 weeks (vacation in the month of August).

4.2. Typical curriculum of the educational professional residency program in the specialty "traumatologist, orthopedist" for 3 years of study

Code - 128
Qualification awarded: "Traumatologist-orthopedist"
The standard term for training is 3 years
Full-time form of education

Content of the educational program
1st year of study

No.	Name of disciplines for SES	Distribution of curriculum time by type of occupation		Distribution of hours by year
		Total labor intensity according to GOS		Weeks
		Credit units / Credits	In hours	
	General clinical disciplines (20%)	**22.4**	**672**	**14**
1	Operative surgery and topographic anatomy	6.4	192	4
2	Radiation diagnostics	6.4	192	4
3	Osteoarticular phthisiology	3.2	96	2
4	Rheumatology	3.2	96	2
5	Bone oncology	3.2	96	2
	Special (professional) discipline (up to 80%)	**51.2**	**1536**	**32**
1	Traumatological reception	12.8	384	8

2	Adult traumatology	22.4	672	14
3	Pediatric traumatology	6.4	192	4
4	Neurotraumatology	3.2	96	2
5	Anesthesiology and resuscitation	3.2	96	2
6	Thoracic-abdominal trauma	3.2	96	2
	Attestation	**3.2**	**96**	**2**
	Total	**76.8**	**2304**	**48**
	Holidays			**4**
	Total			**52**

Content of the educational program
2nd year of study

No.	**Name of disciplines for SES**	**Distribution of curriculum time by type of occupation**		**Distribution of hours by year**
		Total labor intensity according to GOS		**Weeks**
		Credit units / Credits	**In hours**	
	General clinical disciplines (20%)	**12.8**	**384**	**8**
5	Bone-purulent surgery	6.4	192	4
6	Combustiology	6.4	192	4
	Special (professional) discipline (80%)	**60.8**	**1724**	**38**
1	Traumatological reception	22.4	672	14
2	Adult traumatology	25.6	768	16
4	Anesthesiology and resuscitation	6.4	192	4
5	Neurotraumatology	6.4	192	4
	Attestation	**3.2**	**96**	**2**

	Total	**76.8**	**2304**	**48**
	Holidays			**4**
	Total			**52**

Content of the educational program
3rd year of study

No.	**Name of disciplines for SES**	**Distribution of curriculum time by type of occupation**		**Distribution of hours by year**
		Total labor intensity according to GOS		**Weeks**
		Credit units / Credits	**In hours**	
	Special (professional) discipline	**59.2**	**1776**	**37**
1	Adult Orthopedics	16.0	480	10
2	Pediatric Orthopedics	14.4	432	9
3	Joint pathology	14.4	432	9
4	Spine pathology	14.4	432	9
	Optional disciplines (humanitarian and general education block) out of 4 choose 3	**14.4**	**432**	**9**
1	Istanbul Protocol (August 9, 1999)	4.8	144	3
2	Ministry of Emergency Situations	4.8	144	3
3	pedagogy and psychology	4.8	144	3
4	Public health			
	Attestation	**3.2**	**96**	**2**
	Total	**76.8**	**2304**	**48**
	Holidays			**4**
	Total			**52**

The distribution by type of study of the total hours of the educational program of postgraduate education is: classroom work - 10%, clinical practice - 90% (including a training simulation course - 1 week).

The maximum volume of the student's study load is set at 48 hours per week, including all types of classroom and extracurricular work.

Distribution of hours per week by type of study of the educational program of postgraduate education in residency for the years of study.

No. n \ n	Discipline section name	Classroom part 10%		Clinical practice 90%	Total 100%	Total 100%
		Lectures (academic hours)	Seminars (academic hours)	Total (academic hours per week)	Total (academic hours per week)	Total (credit hours per week)
1	**General clinical disciplines (related and fundamental)**	**100**	**100**	**2159,4**	**2399,7**	**80**
	Operative surgery and topographic anatomy	8	8	172,8	192	6,4
	Radiation diagnostics	8	8	172,8	192	6,4
	Osteoarticular phthisiology	4	4	86,4	96	3,2
	Rheumatology	4	4	86,4	96	3,2
	Pediatric traumatology	8	8	172,8	192	6,4
	Bone oncology	4	4	86,4	96	3,2
	Neurotraumatology	12	12	259	288	9,6
	Resuscitation	12	12	259	288	9,6
	Toroka-abdominal trauma	4	4	86,4	96	3,2
	Traumatological reception	28	28	604,6	671,7	22,4
	Combustiology	8	8	172,8	192	6,4
2	**Main discipline**	**226**	**226**	**4881,6**	**5424**	**180,8**
	Adult Orthopedics	20	20	431,8	479,7	16
	Pediatric Orthopedics	18	18	388,8	432	14,4
	Joint pathology	18	18	388,8	432	14,4
	Spine pathology	18	18	388,8	432	14,4

	Adult traumatology	60	60	1296	1440	48
	Bone-purulent surgery	8	8	172,8	192	6,4
	Laboratory and instrumental diagnostic methods in traumatology, orthopedics	8	8	172,8	192	6,4
	Physiotherapy for orthopedic diseases	4	4	86,4	96	3,2
	Rehabilitation of patients with traumatological and orthopedic pathology. Spa treatment.	4	4	86,4	96	3,2
	Emergencies in traumatology	6	6	130	144	4,8
	Outpatient management of patients with trauma pathology	44	44	950,4	1056	35,2
	Simulation course (end-to-end)					
3	**Optional disciplines (humanitarian and general education block and special disciplines) (any 3 of 4)** [I1]	18	18	389	432	14,4
	Pedagogy and Medical Psychology					
	Istanbul Protocol (1999)					
	Emergency medicine					
	Public health					

Note : Based on the Requirements for the minimum content of educational residency programs, approved. by order of the Ministry of Health of the Kyrgyz Republic No. 691 dated 04.10.2018. "On approval of requirements for the structure of the main professional educational program of postgraduate medical education (residency) in the Kyrgyz Republic", in order to improve the quality of diagnosis and treatment of surgical pathology and increase competencies, several changes were made in the curriculum for the specialty "Traumatology and Orthopedics" to expand the volume of special subject at the expense of optional disciplines (approved by the decision between the cathedral meeting) .

The scope of the discipline, types of educational work and forms of control

Special professional discipline 1st year of study.

The scope of the discipline, types of educational work and forms of control

Theme	Total hours	Classroom hours		Clinical practice	Forms of control
		Lectures	Practice		
1st year of study. Special professional discipline	**1536**	**64**	**64**	**1408**	
Topic №1 History of the development and organization of traumatological and orthopedic care in the Kyrgyz Republic. Issues of ethics and deontology in orthopedics and traumatology.		2	2		Offset Oral interviews, filling out diaries
Topic №2 Traumatology and orthopedics as a science of injuries and diseases of the musculoskeletal system. The main methods of treatment of trauma and orthopedic patients		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic №3 General and special research methods and basic principles of treatment of traumatological and orthopedic patients.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out

					diaries
Topic №4 Clinical anatomy of the shoulder girdle and upper limbs		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 5 Clinical anatomy of the pelvis and hip		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic №6 Clinical anatomy of the leg and foot.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 7 Clinical anatomy of the chest		2	2		Offset Oral intervie

					ws, solving situational problems, assessment of practical skills, filling out diaries
Topic №8 Clinical anatomy of the spine.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic No. 9 Injuries of the shoulder girdle and upper limb, dislocations and fractures of the clavicle, ribs and scapula. The mechanism of injury. Clinic, diagnosis and treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic №10 Shoulder fractures, classification of the fracture clinic, diagnosis and treatment.		2	2		Offset Oral interviews, solving situational

					problems, assessment of practical skills, filling out diaries
Topic number 11. Fractures and dislocations of the bones of the forearm. Clinic, diagnostics, treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 12. Fractures of the bones of the hand. Perilunar dislocation of the hand. Bennett, Roland's fractures. Clinic, diagnostics, treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 13. Spinal injury. Classification, mechanism of injury. Clinic, diagnosis of injuries of the spine and spinal cord. Conservative treatment of uncomplicated vertebral fractures, indications for surgical treatment. Transportation of patients with spinal injuries.		2	2		Offset Oral interviews, solving situational problems, assessment of

					practical skills, filling out diaries
Topic number 14. Injury to the pelvic bone. Classification of pelvic fractures according to Kaplan, according to AO / ASIF. Mechanism of trauma clinic, diagnosis of pelvic fractures, treatment. Conservative and surgical methods of treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 15. Lower limb injuries. Fractures of the proximal end of the femur. Femoral neck fractures, trochanteric fractures, injury mechanism classification. Clinic, diagnostics, treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 16. Diaphyseal hip fractures. Open hip fractures, features. Clinic, diagnostics, treatment. Types of surgical treatment		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out

					diaries
Topic number 17. Fractures of the distal end of the femur. Fractures of the femoral condyles. Classification mechanism of injury. Clinic, diagnostics, treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 18. Patella fractures, clinical picture, diagnosis, treatment. Clinic, diagnostics, treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 19. Shin fractures. Classification, fractures of the tibial condyles. Clinic, diagnostics, treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 20. Diaphyseal fractures of the leg bones. Classification, clinic, diagnosis, treatment.		2	2		Offset Oral intervie

					ws, solving situational problems, assessment of practical skills, filling out diaries
Topic number 21. Fractures of the ankles. Clinic, diagnostics, treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 22. Fractures of the bones of the foot. Classification mechanism of injury, clinic, diagnosis, treatment. Fractures of the bones of the tarsus, metatarsal bones and phalanges of the toes. Clinic, diagnostics, treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 23. CCMT. Brain concussion. Clinic. Diagnostics. Treatment.		2	2		Offset Oral interviews, solving situational

					problems, assessment of practical skills, filling out diaries
Topic number 24. OTBI. Brain contusion. Clinic. Diagnostics. Treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 25. Anesthesia, intensive care and resuscitation in trauma patients.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 26. Traumatic shock. Definition of traumatic shock, classification. Pathogenesis, phases of traumatic shock. Anti-shock treatment at the prehospital stage and in the hospital.		2	2		Offset Oral interviews, solving situational problems, assessment of

					practical skills, filling out diaries
Topic number 27. Polytrauma. Multiple, combined, combined injuries. Classification. Symptoms. Complications. Prevention. Treatment principles.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 28. Injury to the pelvic organs. Damage to the urethra, bladder. Diagnostics, surgeon's tactics. Conservative and surgical methods of treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 29. Birth injuries of the musculoskeletal system		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out

					diaries
Topic number 30. Hip dysplasia		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 31. Features of traumatic injuries in children. Childhood injuries. Research methods		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 32. Combined trauma in children. Providing emergency care		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
TOTAL		64	64		

THEMATIC LECTURE PLAN

in a special discipline for clinical residents of 1 year of study

No.	Theme	number of hours
1	The history of the development and organization of traumatological and orthopedic care in the Kyrgyz Republic. Issues of ethics and deontology in orthopedics and traumatology.	2
2	Traumatology and orthopedics as a science of injuries and diseases of the musculoskeletal system. The main methods of treatment of trauma and orthopedic patients	2
3	General and special research methods and basic principles of treatment of traumatological and orthopedic patients.	2
4	Clinical anatomy of the shoulder girdle and upper limbs	2
5	Clinical anatomy of the pelvis and hip	2
6	Clinical anatomy of the lower leg and foot.	2
7	Clinical chest anatomy	2
8	Clinical anatomy of the spine.	2
9	Injuries to the shoulder girdle and upper limb, dislocations and fractures of the clavicle, ribs and scapula. The mechanism of injury. Clinic, diagnosis and treatment.	2
10	Shoulder fractures, fracture classification clinic, diagnosis and treatment.	2
11	Fractures and dislocations of the bones of the forearm. Clinic, diagnostics, treatment.	2
12	Fractures of the bones of the hand. Perilunar dislocation of the hand. Bennett, Roland's fractures. Clinic, diagnostics, treatment.	2
13	Spinal injury. Classification, mechanism of injury. Clinic, diagnosis of injuries of the spine and spinal cord. Conservative treatment of uncomplicated vertebral fractures, indications for surgical treatment. Transportation of patients with spinal injuries.	2
14	Injury to the pelvic bone. Classification of pelvic fractures according to Kaplan, according to AO / ASIF. Mechanism of trauma clinic, diagnosis of pelvic fractures, treatment. Conservative and surgical methods of treatment.	2
15	Lower limb injuries. Fractures of the proximal end of the femur. Femoral neck fractures, trochanteric fractures, injury mechanism classification. Clinic, diagnostics, treatment.	2
16	Diaphyseal hip fractures. Open hip fractures, features. Clinic, diagnostics, treatment. Types of surgical treatment	2
17	Fractures of the distal end of the femur. Fractures of the femoral condyles. Classification mechanism of injury. Clinic, diagnostics, treatment.	
18	Patella fractures, clinical picture, diagnosis, treatment. Clinic, diagnostics, treatment.	2

19	Shin fractures. Classification, fractures of the tibial condyles. Clinic, diagnostics, treatment.	2
20	Diaphyseal fractures of the leg bones. Classification, clinic, diagnosis, treatment.	
21	Fractures of the ankles. Clinic, diagnostics, treatment.	
22	Fractures of the bones of the foot. Classification mechanism of injury, clinic, diagnosis, treatment. Fractures of the bones of the tarsus, metatarsal bones and phalanges of the toes. Clinic, diagnostics, treatment.	2
23	CCMT. Brain concussion. Clinic. Diagnostics. Treatment.	2
24	OTBI. Brain contusion. Clinic. Diagnostics. Treatment.	2
25	Anesthesia, intensive care and resuscitation in trauma patients.	2
26	Traumatic shock. Definition of traumatic shock, classification. Pathogenesis, phases of traumatic shock. Anti-shock treatment at the prehospital stage and in the hospital.	
27	Polytrauma. Multiple, combined, combined injuries. Classification. Symptoms. Complications. Prevention. Treatment principles.	2
28	Injury to the pelvic organs. Damage to the urethra, bladder. Diagnostics, surgeon's tactics. Conservative and surgical methods of treatment.	2
29	Birth injuries of the musculoskeletal system	2
30	Hip dysplasia	2
31	Features of traumatic injuries in children. Childhood injuries. Research methods	2
32	Combined trauma in children. Providing emergency care	2
	TOTAL	64

THEMATIC PRACTICE PLAN

in a special discipline for clinical residents of 1 year of study

No.	Theme	number of hours
1	The history of the development and organization of traumatological and orthopedic care in the Kyrgyz Republic. Issues of ethics and deontology in orthopedics and traumatology.	2
2	Traumatology and orthopedics as a science of injuries and diseases of the musculoskeletal system. The main methods of treatment of trauma and orthopedic patients	2
3	General and special research methods and basic principles of treatment of traumatological and orthopedic patients.	2
4	Clinical anatomy of the shoulder girdle and upper limbs	2
5	Clinical anatomy of the pelvis and hip	2

6	Clinical anatomy of the lower leg and foot.	2
7	Clinical chest anatomy	2
8	Clinical anatomy of the spine.	2
9	Injuries to the shoulder girdle and upper limb, dislocations and fractures of the clavicle, ribs and scapula. The mechanism of injury. Clinic, diagnosis and treatment.	2
10	Shoulder fractures, fracture classification clinic, diagnosis and treatment.	2
11	Fractures and dislocations of the bones of the forearm. Clinic, diagnostics, treatment.	2
12	Fractures of the bones of the hand. Perilunar dislocation of the hand. Bennett, Roland's fractures. Clinic, diagnostics, treatment.	2
13	Spinal injury. Classification, mechanism of injury. Clinic, diagnosis of injuries of the spine and spinal cord. Conservative treatment of uncomplicated vertebral fractures, indications for surgical treatment. Transportation of patients with spinal injuries.	2
14	Injury to the pelvic bone. Classification of pelvic fractures according to Kaplan, according to AO / ASIF. Mechanism of trauma clinic, diagnosis of pelvic fractures, treatment. Conservative and surgical methods of treatment.	2
15	Lower limb injuries. Fractures of the proximal end of the femur. Femoral neck fractures, trochanteric fractures, injury mechanism classification. Clinic, diagnostics, treatment.	2
16	Diaphyseal hip fractures. Open hip fractures, features. Clinic, diagnostics, treatment. Types of surgical treatment	2
17	Fractures of the distal end of the femur. Fractures of the femoral condyles. Classification mechanism of injury. Clinic, diagnostics, treatment.	
18	Patella fractures, clinical picture, diagnosis, treatment. Clinic, diagnostics, treatment.	2
19	Shin fractures. Classification, fractures of the tibial condyles. Clinic, diagnostics, treatment.	2
20	Diaphyseal fractures of the leg bones. Classification, clinic, diagnosis, treatment.	
21	Fractures of the ankles. Clinic, diagnostics, treatment.	
22	Fractures of the bones of the foot. Classification mechanism of injury, clinic, diagnosis, treatment. Fractures of the bones of the tarsus, metatarsal bones and phalanges of the toes. Clinic, diagnostics, treatment.	2
23	CCMT. Brain concussion. Clinic. Diagnostics. Treatment.	2
24	OTBI. Brain contusion. Clinic. Diagnostics. Treatment.	2
25	Anesthesia, intensive care and resuscitation in trauma patients.	2
26	Traumatic shock. Definition of traumatic shock, classification. Pathogenesis, phases of traumatic shock. Anti-shock treatment at the prehospital stage and in the hospital.	
27	Polytrauma. Multiple, combined, combined injuries. Classification. Symptoms. Complications. Prevention. Treatment	2

	principles.	
28	Injury to the pelvic organs. Damage to the urethra, bladder. Diagnostics, surgeon's tactics. Conservative and surgical methods of treatment.	2
29	Birth injuries of the musculoskeletal system	2
30	Hip dysplasia	2
31	Features of traumatic injuries in children. Childhood injuries. Research methods	2
32	Combined trauma in children. Providing emergency care	2
	TOTAL	64

Control questions:

1. Dislocations of the acromial end of the clavicle, clinic, treatment
2.Mechanisms of bone fractures and displacement of fragments, types of displacement
3.Mechanism of occurrence of Dupuytren's fracture
4. List the bones that make up the skeleton of the upper limb
5.What is an intra-articular fracture of the proximal shoulder
6. Timing of consolidation of the femoral neck, reasons.
7. Anatomy of the lower limb. What is the cervico-shaft angle?
8. The fundamental difference between hip fractures and trochanteric fractures.
9.What is transport immobilization? Name its types.
10. Displacement of fragments of the clavicle and their causes.
11.Conservative treatment of scaphoid fracture.
12.What is gypsum? What types of plaster casts do you know?
13. Fracture of the patella. Indications for surgical treatment.
14. Violations of fracture healing, types and causes.
15. What are fresh, stale, old and habitual dislocations?
16. What are the indications for surgical treatment of olecranon fracture?
17. Where does the callus come from? Its types.
18. In what position is the limb fixed in case of a forearm fracture in the upper third, what is the volume of the bandage?
19. What is a joint puncture, general principles of the technique?
20. The mechanism of occurrence of Malgene's fracture.
21. Indications for surgery for fractures of the clavicle and types of interventions.
22. What is a tubercle-ram angle? Treatment of fractures of the calcaneus with displacement of fragments.
23. What are the elements that make up the joint?
24. Name the types of ray fracture in a typical place, depending on the mechanism of injury and displacement of the fragments.
25. What are “three-ankle” and “four-ankle” fractures?
26. What parts of the scapula are damaged by direct and indirect mechanisms of injury?
27. Conservative and surgical treatment of hip shaft fractures.
28. What is the function of the clavicle in the musculoskeletal system?
29. How is the osteosynthesis of the forearm bones performed?
30. The mechanism of occurrence of Dupuytren's fracture.
31. Why is it not always possible to diagnose “rib fracture” on a radiograph?
32. What is the difference between abduction and abduction fractures of the surgical neck of the shoulder?

33. Types of femoral neck fractures, depending on the location of the fracture and the mechanism of injury.
34. Prolonged pressure syndrome (PPS). Diagnostics, treatment.
35. What are the indications for surgical treatment of fractures of the diaphysis of the shoulder?
36. What are the indications for surgical treatment of olecranon fracture?
37. Features of the clinic of a fracture of the scaphoid bone.
38. What is a tubercle-ram angle? Treatment of fractures of the calcaneus with displacement of fragments?
39. What parts of the scapula are damaged by direct and indirect mechanisms of injury?
40. Treatment of fractures of the calcaneus without displacement of bone fragments.
41. Name the points where the puncture of the joints of the lower extremity is performed.
42. What are the indications for surgical treatment of fractures of the diaphysis of the shoulder?
43. Metatarsal fractures. Reasons, treatment.
44. General principles and technique of applying plaster casts.
45. What are the mechanisms of injury of fractures of the ribs and sternum?
46. Skeletal traction. Purpose and application technique.
47. Fractures of the femoral condyles. Tactics, treatment features.
48. Rupture of the pubic articulation. Clinic, treatment.
49. The main sources of bleeding in pelvic fractures, the amount of blood loss and the location of the hematoma.

Main literature:

1. Traumatology and Orthopedics. A textbook for students of honey. Universities. / Edited by Kh.A. Musalatova, G.S. Yumasheva - M .: Medicine 1995
2. Kotelnikov GP: Traumatology and orthopedics. - M .: GEOTAR-Media, 2006.
3. Kornilov N.V. - Traumatology and Orthopedics. 3rd edition.
4. Yumashev G.S. Traumatology and Orthopedics 1999

Additional literature

1. Böhler L. Technique for the treatment of bone fractures / per. with German. - M .: L., 1937 .-- 503 p.
2. Boychee B., Konforti B., Chokanov K. Operative orthopedics and traumatology. - Sofia, 1961 .-- 832 p.
3. Ninth A.A.Transosseous osteosynthesis. - Chisinau, 1990 .-- 286 p.
4. Kaplan A.V. Injuries to bones and joints. - 3rd ed., Rev. and add. - M .: Medicine, 1978 .-- 568 p.
5. Kaplan A. V., Makhson H. E., Melnikova V. M. Purulent traumatology of bones and joints. - M., 1985 .-- 384 p.
6. Klyuchevsky V.V.Skeletal traction. - L., 1991 .-- 160 p.
7. Klyuchevsky V.V. Surgery of injuries ... - Yaroslavl: DIA-press, 1999. - 646 p.
8. Kornilov N.V., Gryaznukhin E.G. Medical care in case of accidents and natural disasters. - SPb. Hippocrates, 1992 .-- 178 p.
9. Kornilov N.V., Gryaznukhin E.G. Traumatological and orthopedic care in the clinic: a guide for doctors. - SPb. Hippocrates, 1994 .-- 320 p.
10. Kornilov N. K, Kulyaba T. A., Novoselov K. A. Knee arthroplasty. - SPb. Hippocrates, 2006 .-- 176 p.
11. Kosinskaya NS Fibrous dystrophies and dysplasias of bones. - L .: Medicine, 1973 .-- 418 p.

12. Krasnov A.F., Arshin V.M., Zeitlin M.D. Traumatology Handbook. - M .: Medicine, 1984 .-- 400 p.
13. Mazurov V.I., Opuschenko I.A. Osteoarthritis. - SPb. SPbMAPO, 2000 .-- 116 p.
14. Marks V.O. Orthopedic diagnostics. - Minsk: Science and technology, 1978 .-- 512 p.
15. Movshovich I.A.Operative orthopedics. - M .: Medicine, 1983 .-- 416 p.
16. Müller M. E., Allgover M., Schneider R. et al. Guide to internal osteosynthesis. - M .: Ad Marginem, 1996 .-- 750 p.
17. Nikitin GD, Gryaznukhin EG Multiple fractures and associated injuries. - L .: Medicine, 1983 .-- 268 p.
18. Wounds and wound infection: a guide for doctors / ed. M. I. Kuzina, B. M. Kostyuchenok. - 2nd ed. - M .: Medicine, 1990 .-- 592 p.
19. Guidelines for prosthetics and orthodontics / ed. A.I.Keyer, A.V. Rozhkova. - SPb. Hippocrates, 1999 .-- 624 p.
20. Traumatology and orthopedics: a guide for doctors / ed. Yu. G. Shaposhnikova: in 3 volumes - M .: Medicine, 1997.
21. Traumatology and orthopedics: a guide for doctors / ed. HB. Kornilov: in 4 volumes - St. Petersburg: Hippocrates, 2004.
22. *Usoltseva E.V., Moshkara K.I.* Surgery of diseases and injuries of the hand. - L., 1986 .-- 351 p.
23. *Chaklin V.D.* Tumors of bones and joints. - M .: Medicine, 1974 .-- 280 p. *Candle S.* Campbell's operative orthopedics. - St. Louis: Mosby - Year Book, 1998.
24. General medical practice: national guidelines. In 2 volumes / edited by Acad. RAS I.N. Denisov, prof. O. M. Lesnyak. - M .: GEOTAR-Media, 2016 .-- 976 p.
25. Dmitriev , V.A. The value of educational work in the preparation of a future doctor. Higher education in Russia. Moscow 2011.
26. Tomashchik T.E. A course of lectures on deontology. 2008 r.
27. Grace P. Visual Surgery. - M .: GEOTAR, 2008
28. Outpatient surgery. A guide for doctors, teachers and students. Under. Edited by prof. EAT. Blagitko. Novosibirsk, 2001
29. Pautkin Yu.F., Malyarchuk V.I. Outpatient surgery, Moscow 2005
30. ... Traumatology and Orthopedics. A textbook for students of honey. Universities. / Edited by Kh.A. Musalatova, G.S. Yumasheva - M .: Medicine 1995
31. 2. Kotelnikov GP: Traumatology and orthopedics. - M .: GEOTAR-Media, 2006.
32. 3. Kornilov N.V. - Traumatology and Orthopedics. 3rd edition.
33. 4. Yumashev G.S. Traumatology and Orthopedics 1999
34. V.K. Gostishchev General surgery. 2002
35. Yuskov Yu.V. Surgery Q&A 2010
36. Radushkevich, V.L. Resuscitation and intensive therapy for a practicing doctor: monograph. / V.L. Radushkevich, B.I. Bartashevich. - M .: Medical Information Agency, 2011.
37. Barash, Paul Clinical Anesthesiology / Paul Barash, Bruce Cullen, Robert Stalting. - M .: Medical literature, 2010 .-- 720 p.
38. Sumin, S.A. Anesthesiology, Reanimatology, Intensive Care: Medical Information Agency, 2015.
39. Beringer, Yu.V. A brief practical guide to pain relief / State publishing house of medical literature, 2001.
40. Valin, E. Intensive care / E. Valin, L. Westermark, A. Van der Vliit. - M .: Medicine, 2002.
41. Dean, R. Hess Artificial lung ventilation / Dean R. Hess, Robert M. Kaczmarek. - M .: Binom, Dialect, 2009.
42. Dyachenko P.K. Private anesthesiology / P.K. Dyachenko, V.M. Vinogradov. - Moscow: SINTEG, 2013.

43. Duke, James Secrets of Anesthesia / James Duke. - M .: MEDpress-inform, 2007.
44. Koryachkin V.A. Explanatory dictionary of anesthesiologist-resuscitator: monograph. / V.A. Koryachkin. - M .: SpetsLit, 2007.
45. Krzhechkovskaya, V.V. Medicines in anesthesiology. Local anesthetics / V.V. Krzhechkovskaya, R.Sh. Vakhtangishvili. - M .: Phoenix, 2006.-
46. Medical rehabilitation. In 3 books. Book 3. / Edited by V.M. Bogolyubov. - M .: Binom, 2010.
47. Dmitriev , V.A. The value of educational work in the preparation of a future doctor. Higher education in Russia. Moscow 2011.
48. Tomashchik T.E. A course of lectures on deontology. 2008 r.
49. Outpatient surgery. A guide for doctors, teachers and students. Under. Edited by prof. EAT. Blagitko. Novosibirsk, 2001
50. Alekseev AA Classification of the depth of tissue damage in burns. Collection of scientific papers of the III Congress of combustiologists of Russia. - 2010.
51. Alekseev AA Lavrov V.A. Medical assistance to victims of burns. Reset Scientific works of the II Congress of combustiologists of Russia M. 2008.
52. Alekseev AA Local drug treatment of burn wounds: problems and prospects Actual problems of thermal injury: mat. int. conf. SPb, 2002.
53. Alekseev AA Burn infection. Etiology, pathogenesis, prevention and treatment: monograph. M .: Vuzovskaya kniga, 2010.
54. Kuznetsov N.A. general surgery. 2009
55. Human Anatomy: In 2 volumes // Ed. M.R. Sapina. M .: Medicine, 1987.420 p.
56. Pimanov S.I., Makarenko E.V. Diagnosis and treatment of Helicobacterpylori infection: recommendations of the Maastricht III Consensus and comments. A guide for doctors. - Vitebsk: VSMU Publishing House, 2007.
57. Vorobyov Yu.L. Life safety. Russian Emergency Situations Ministry. - M .: Business Express, 2005.
58. 2. Zavyalova V.N. Civil defense. - M .: Medicine, 1989.
59. 3. Zhukov B.N. Reanimatology. - M .: Academy, 2006.
60. 4. Levchuk I.P., Tretyakov N.V. Emergency Medicine. Lecture course. - M .: GEOTAR-Media, 2011.
61. 5. Korotkov B.P., Cherepanov I.G. Life safety and disaster medicine. - Moscow: Science, press, 2008.
62. 6. Rozin LB , Batkin AA , Katrushenko RN Treatment of burns and frostbite / Reviewer: ND Kazantseva . - Ed. 2nd, isp. and add. - L .: Medicine . Leningrad. department, 1984 .-- 176 p. - (Library of the paramedical worker). - 30 000 copies. (region)
63. 7. Petrov S. V. General surgery: Textbook for universities. - 2nd ed. - 2004 .-- 768 p. - ISBN 5-318-00564-0 .
64. Analytical review of the organization of health services delivery in the Kyrgyz Republic: what the facts tell (2018). - EuroVOZ: Center for PHC. - 2018 .-- 82s. Available on the website: http://www.euro.who.int/__data/assets/pdf_file/0006/378843/RUS_07_Kyrgyzstan-HSD_final-web.pdf?ua=1
65. Report on the results of the first meeting of the Primary Health Care Advisory Group (20-21 June 2017 Almaty, Kazakhstan) - EuroWHO: Center for Primary Health Care . - 2017. - 68s. Available at: http://www.euro.who.int/__data/assets/pdf_file/0008/370655/phcag-report-2017-rus.pdf?ua=1

Thematic plan of lectures

No.	Theme	number of	form of

		hours	control
No.	Theme	number of hours	TC
1	The history of the development and organization of traumatological and orthopedic care in the Kyrgyz Republic. Issues of ethics and deontology in orthopedics and traumatology.	2	TC
2	Traumatology and orthopedics as a science of injuries and diseases of the musculoskeletal system. The main methods of treatment of trauma and orthopedic patients	2	TC
3	General and special research methods and basic principles of treatment of traumatological and orthopedic patients.	2	TC
4	Clinical anatomy of the shoulder girdle and upper limbs	2	TC
5	Clinical anatomy of the pelvis and hip	2	TC
6	Clinical anatomy of the lower leg and foot.	2	TC
7	Clinical chest anatomy	2	TC
8	Clinical anatomy of the spine.	2	TC
9	Injuries to the shoulder girdle and upper limb, dislocations and fractures of the clavicle, ribs and scapula. The mechanism of injury. Clinic, diagnosis and treatment.	2	TC
10	Shoulder fractures, fracture classification clinic, diagnosis and treatment.	2	TC
11	Fractures and dislocations of the bones of the forearm. Clinic, diagnostics, treatment.	2	TC
12	Fractures of the bones of the hand. Perilunar dislocation of the hand. Bennett, Roland's fractures. Clinic, diagnostics, treatment.	2	TC
13	Spinal injury. Classification, mechanism of injury. Clinic, diagnosis of injuries of the spine and spinal cord. Conservative treatment of uncomplicated vertebral fractures, indications for surgical treatment. Transportation of patients with spinal injuries.	2	TC
14	Injury to the pelvic bone. Classification of pelvic fractures according to Kaplan, according to AO / ASIF. Mechanism of trauma clinic, diagnosis of pelvic fractures, treatment. Conservative and surgical methods of treatment.	2	TC
15	Lower limb injuries. Fractures of the proximal end of the femur. Femoral neck fractures, trochanteric fractures, injury mechanism classification. Clinic, diagnostics, treatment.	2	TC
16	Diaphyseal hip fractures. Open hip fractures, features. Clinic, diagnostics, treatment. Types of surgical treatment	2	TC
17	Fractures of the distal end of the femur. Fractures of the femoral condyles. Classification mechanism of injury. Clinic, diagnostics, treatment.		TC

18	Patella fractures, clinical picture, diagnosis, treatment. Clinic, diagnostics, treatment.	2	TC
19	Shin fractures. Classification, fractures of the tibial condyles. Clinic, diagnostics, treatment.	2	TC
20	Diaphyseal fractures of the leg bones. Classification, clinic, diagnosis, treatment.		TC
21	Fractures of the ankles. Clinic, diagnostics, treatment.		TC
22	Fractures of the bones of the foot. Classification mechanism of injury, clinic, diagnosis, treatment. Fractures of the bones of the tarsus, metatarsal bones and phalanges of the toes. Clinic, diagnostics, treatment.	2	TC
23	CCMT. Brain concussion. Clinic. Diagnostics. Treatment.	2	TC
24	OTBI. Brain contusion. Clinic. Diagnostics. Treatment.	2	TC
25	Anesthesia, intensive care and resuscitation in trauma patients.	2	TC
26	Traumatic shock. Definition of traumatic shock, classification. Pathogenesis, phases of traumatic shock. Anti-shock treatment at the prehospital stage and in the hospital.		TC
27	Polytrauma. Multiple, combined, combined injuries. Classification. Symptoms. Complications. Prevention. Treatment principles.	2	TC
28	Injury to the pelvic organs. Damage to the urethra, bladder. Diagnostics, surgeon's tactics. Conservative and surgical methods of treatment.	2	TC
29	Birth injuries of the musculoskeletal system	2	TC
30	Hip dysplasia	2	TC
31	Features of traumatic injuries in children. Childhood injuries. Research methods	2	TC
32	Combined trauma in children. Providing emergency care	2	

Legend: TC - test control

Thematic plan of practical lessons

No.	Theme	number of hours	form of control
1	The history of the development and organization of traumatological and orthopedic care in the Kyrgyz Republic. Issues of ethics and	2	OI, SZ,

	deontology in orthopedics and traumatology.		TC
2	Traumatology and orthopedics as a science of injuries and diseases of the musculoskeletal system. The main methods of treatment of trauma and orthopedic patients	2	OI, SZ, CC
3	General and special research methods and basic principles of treatment of traumatological and orthopedic patients.	2	OI, SZ, CC
4	Clinical anatomy of the shoulder girdle and upper limbs	2	OI, SZ, CC
5	Clinical anatomy of the pelvis and hip	2	OI, SZ, CC
6	Clinical anatomy of the lower leg and foot.	2	OI, SZ, CC
7	Clinical chest anatomy	2	OI, SZ, CC
eight	Clinical anatomy of the spine.	2	OI, SZ, CC
nine	Injuries to the shoulder girdle and upper limb, dislocations and fractures of the clavicle, ribs and scapula. The mechanism of injury. Clinic, diagnosis and treatment.	2	OI, SZ, CC
ten	Shoulder fractures, fracture classification clinic, diagnosis and treatment.	2	OI, SZ, CC
eleven	Fractures and dislocations of the bones of the forearm. Clinic, diagnostics, treatment.	2	OI, SZ, CC
12	Fractures of the bones of the hand. Perilunar dislocation of the hand. Bennett, Roland's fractures. Clinic, diagnostics, treatment.	2	OI, SZ, CC
13	Spinal injury. Classification, mechanism of injury. Clinic, diagnosis of injuries of the spine and spinal cord. Conservative treatment of uncomplicated vertebral fractures, indications for surgical treatment. Transportation of patients with spinal injuries.	2	OI, SZ, CC
fourteen	Injury to the pelvic bone. Classification of pelvic fractures according to Kaplan, according to AO / ASIF. Mechanism of trauma clinic, diagnosis of pelvic fractures, treatment. Conservative	2	OI, SZ, CC

	and surgical methods of treatment.		
15	Lower limb injuries. Fractures of the proximal end of the femur. Femoral neck fractures, trochanteric fractures, injury mechanism classification. Clinic, diagnostics, treatment.	2	OI, SZ, CC
16	Diaphyseal hip fractures. Open hip fractures, features. Clinic, diagnostics, treatment. Types of surgical treatment	2	OI, SZ, CC
17	Fractures of the distal end of the femur. Fractures of the femoral condyles. Classification mechanism of injury. Clinic, diagnostics, treatment.		OI, SZ, CC
eightee n	Patella fractures, clinical picture, diagnosis, treatment. Clinic, diagnostics, treatment.	2	OI, SZ, CC
19	Shin fractures. Classification, fractures of the tibial condyles. Clinic, diagnostics, treatment.	2	OI, SZ, CC
twenty	Diaphyseal fractures of the leg bones. Classification, clinic, diagnosis, treatment.		OI, SZ, CC
21	Fractures of the ankles. Clinic, diagnostics, treatment.		OI, SZ, CC
22	Fractures of the bones of the foot. Classification mechanism of injury, clinic, diagnosis, treatment. Fractures of the bones of the tarsus, metatarsal bones and phalanges of the toes. Clinic, diagnostics, treatment.	2	OI, SZ, CC
23	CCMT. Brain concussion. Clinic. Diagnostics. Treatment.	2	OI, SZ, CC
24	OTBI. Brain contusion. Clinic. Diagnostics. Treatment.	2	OI, SZ, CC
25	Anesthesia, intensive care and resuscitation in trauma patients.	2	US, SZ, CC
26	Traumatic shock. Definition of traumatic shock, classification. Pathogenesis, phases of traumatic shock. Anti-shock treatment at the prehospital stage and in the hospital.		OI, SZ, CC
27	Polytrauma. Multiple, combined, combined injuries. Classification. Symptoms. Complications. Prevention. Treatme nt principles.	2	OI, SZ, CC

28	Injury to the pelvic organs. Damage to the urethra, bladder. Diagnostics, surgeon's tactics. Conservative and surgical methods of treatment.	2	OI, SZ, CC
29	Birth injuries of the musculoskeletal system	2	US, SZ, CC
thirty	Hip dysplasia	2	OI, SZ, TC
31	Features of traumatic injuries in children. Childhood injuries. Research methods	2	OI, SZ, TC
32	Combined trauma in children. Providing emergency care	2	

Legend: OI-Oral interview, SZ-decision SZ, TC-test control.

The most common symptoms and syndromes in traumatology and orthopedics that a resident should be able to diagnose and provide treatment and prophylactic assistance.

Symptom / Syndrome
Abdominal pain
Chest pain
Low back / back pain
Groin pain
Limb pain
Joint pain
Muscle pain
Limb deformity
Changes in skin color and turgor
Limb axis change
Changing the length and circumference of the limb
Crepitus
Bone crunch
Pathological mobility
Contracture and ankylosis
Paresis and paralysis
Headache
Bleeding
Dysuria and changes in urine
Hyperthermia and hypothermia
Itchy skin
Burns
Loss of appetite
Weight loss
Weakness
Nausea and vomiting
Trophic ulcers of the lower extremities

Dyspnea
Tachycardia

MEDICAL HANDLING / SKILLS

A clinical resident of a narrow specialty should be able to perform the following manipulations in the section "Traumatology" independently:

No.	Skill name	Qty
1	Reposition of fractures, transport immobilization in case of injuries of the limbs and spine;	120-200
2	Reduction of dislocation of bones;	120-200
3	The imposition of plaster casts for different localization of fractures and other injuries.	120-200
4	Applying a vascular suture and stopping bleeding in case of damage to the great vessels;	5-20
5	Removal of foreign bodies from soft tissues:	5-20
6	Primary and secondary debridement	20-50
7	Opening, sanitation and drainage of purulent processes (abscesses, phlegmon, panaritium, mastitis, etc.)	20-50
8	Puncture of the pleural cavity, pericardium, abdominal cavity and large joints and other types of biopsies	1-5
9	Digital rectal examination	5-20
10	Treatment of thermal burns of all degrees;	20-50
11	Surgery to remove an extra-bone plate from various segments	5-10
12	Osteosynthesis of the Ilizarov apparatus on the forearm and lower leg	5-10
13	Evaluation of data from laboratory, biochemical, X-ray, ultrasound, CT and other studies	120-200

Curricula of general clinical related and fundamental disciplines for clinical residents of 1 year of study.

Thematic plan of lectures

No.	Thematic plan	Watch

1	**Operative surgery and topographic anatomy**	
1.1	Features of the topographic anatomy of the upper limb.	2
1.2	Features of the topographic anatomy of the lower limb.	2
1.3	Features of the topographic anatomy of the spine	2
1.4	Features of the topographic anatomy of the pelvis and pelvic organs	2
2	**Radiation diagnostics**	
2.1	X-ray anatomy of the osteoarticular system. age features.	2
2.2	Radiation signs of bone damage	2
2.3		2
2.4		2
3	**Osteoarticular phthisiology**	
3.1	Tuberculous spondylitis: detection, diagnosis, clinical manifestations, complications, treatment, prognosis.	2
3.2	Tuberculosis of bones and joints: detection, diagnosis, clinical manifestations, complications, differential diagnosis, treatment, prognosis.	2
4	**Rheumatology**	
4.1	Topical issues osteoarthritis of large joints.	2
4.2	Topical issues in inflammatory arthropathies of large joints.	2
5	**Bone oncology**	
5.1	Principles of diagnosis and treatment of malignant tumors.	2
5.2	Bone tumors.	2
	Total	**28**

Thematic plan of practical lessons

No.	**Thematic plan**	**Watch**
1	**Operative surgery and topographic anatomy**	
1.1	Features of the topographic anatomy of the upper limb.	2
1.2	Features of the topographic anatomy of the lower limb.	2
1.3	Features of the topographic anatomy of the spine	2
1.4	Features of the topographic anatomy of the pelvis and pelvic organs	2
2	**Radiation diagnostics**	
2.1	X-ray anatomy of the osteoarticular system. age features.	2
2.2	Radiation signs of bone damage	2
2,3		2
		2
3	**Osteoarticular phthisiology**	
3.1	Tuberculous spondylitis: detection, diagnosis, clinical manifestations, complications, treatment, prognosis.	2
3.2	Tuberculosis of bones and joints: detection, diagnosis, clinical manifestations,	2

	complications, differential diagnosis, treatment, prognosis.	
4	**Rheumatology**	
4.1	Topical issues of osteoarthritis of large joints.	2
4.2	Topical issues in inflammatory arthropathies of large joints.	2
5	**Bone oncology**	
5.1	Principles of diagnosis and treatment of malignant tumors.	2
5.2	Bone tumors.	2
	Total	**28**

CONTENT OF THE PROGRAM

Operative surgery and topographic anatomy.

Topic 1. Features of the topographic anatomy of the upper limb. Shoulder girdle (subclavian region, axillary region, scapular region, deltoid region). Free upper limb (front of the shoulder, back of the shoulder, front of the elbow, back of the elbow, front of the forearm, back of the forearm, front of the wrist, back of the wrist, back of the hand, palm, fingers). Blood supply and innervation: Subclavian region, axillary region, scapular region, deltoid region. Front of the shoulder, back of the shoulder, front of the elbow, back of the elbow, front of the forearm, back of the forearm, front of the wrist, back of the wrist, back of the hand, palm, fingers.

Topic 2. Features of the topographic anatomy of the lower limb. The gluteal region. Thigh area, femoral canal. The back of the thigh, obturator canal. Knee area. Shin, popliteal canal, superior muscular peroneal canal. Ankle region. Foot. Blood supply and innervation: Gluteal region. Thigh area, femoral canal. The back of the thigh, obturator canal. Knee area. Shin, popliteal canal, superior muscular peroneal canal. Ankle region. Foot.

Topic 3. Features of the topographic anatomy of the spine. Cervical spine, structure, features of anatomy and topographic anatomy. Thoracic spine, structure, features of anatomy and topographic anatomy. Lumbar spine, structure, features of anatomy and topographic anatomy. Sacral spine, structure, features of anatomy and topographic anatomy Blood supply and innervation of each spine. Topographic anatomy of the spinal cord and its structure and topical features.

Topic 4. Features of the topographic anatomy of the pelvis and pelvic organs. Osteology, arthrology, myology and syndesmology of the pelvic bones. Functional features of the pelvis in the vertical position of the trunk. Blood supply and innervation: Gluteal region. Groin area. Anatomy of the structure of the pelvic organs, blood supply and innervation. Features of the course of the peritoneum. Osteology, arthrology, myology and syndesmology of the pelvic bones.

Radiation diagnostics

Topic 1. X-ray anatomy of the osteoarticular system. Age features. Human skeletal system. Axial (skull, facial and medulla, hyoid bone, auditory bones, spinal column, chest). accessory skeleton (shoulder girdle, upper limb, pelvic girdle, lower limb). Research methods. X-ray methods (X-ray, linear and longitudinal tomography, CT, pneumoarthrography, fistulography, pneumoarthrography and contrasting with water-soluble contrast agents, arteriography, venography, lymphography). Ultrasound examinations. MRT. Radionuclide research. Bone growth and development. Types of bone formation. Primary and secondary ossification. Bone structure. Joint classification. Joint structure.

Topic 2. Radiation signs of bone damage. Basic research methods. Leading radiation research method (X-ray, tomography, CT, MRT), auxiliary method (radioisotope method, positron emission tomography, ultrasound. Types of fractures. Types of displacement. Complications of fracture healing. Dislocations and subluxations.

Topic 3.

Topic 4.

Osteoarticular phthisiology

Topic 1. Tuberculous spondylitis: detection, diagnosis, clinical manifestations, complications, treatment, prognosis. Definition, pathogenesis, classification, identification, diagnosis, clinical manifestations, complications, treatment, prognosis.

Topic 2. Tuberculosis of bones and joints: detection, diagnosis, clinical manifestations, complications, differential diagnosis, treatment, prognosis. Pathogenesis, classification, identification, diagnosis, clinical manifestations, complications. Differential diagnostics. Melting sugar symptom, Aleksandrov's symptom. Treatment (surgical, radical restorative, reconstructive, corrective, therapeutic and auxiliary). Forecast.

Rheumatology

Topic 1. Topical issues of osteoarthritis of large joints. Definition, etiology, risk factors. Environmental factors. Classification. Stages of the disease. X-ray classification. The clinical picture. Diagnostics. Treatment (non-drug and medication). Surgery.

Topic 2. Topical issues in inflammatory arthropathies of large joints. Classification. Rheumatic arthritis. Diagnostics and treatment. Rheumatoid arthritis. Diagnostics, features of the course of rheumatoid arthritis. Reactive polyarthritis. Diagnostics and treatment. Psoriatic arthritis. Diagnostics and treatment. Gonococcal arthritis. Diagnostics and treatment. Tuberculous arthritis. Diagnostics and treatment.

Bone oncology

Topic 1. Principles of diagnosis and treatment of malignant tumors. Types of diagnostics (early diagnosis, oncological alertness, overdiagnosis). Diagnostic principle. Clinical phenomenon (obstruction phenomenon, destruction phenomenon, compression phenomenon, intoxication phenomenon, tumor-like formation phenomenon). Principles of treatment (histological form of the tumor, stage of the disease, determination of the scope of surgery, preoperative chemotherapy and radiation therapy).

Topic 2. Bone tumors. Epidemiology. Etiology. Classification by WHO and TNM. Benign and malignant tumors. Diagnostics. Conservative and surgical treatment. Treatment principles. Evolution of treatment methods for bone tumors.

Thematic plan of lectures

No.	Thematic plan	Watch	Forms of control
1	**Operative surgery and topographic anatomy**		
1.1	Features of the topographic anatomy of the upper limb.	2	**TC**
1.2	Features of the topographic anatomy of the lower limb.	2	**TC**
1.3	Features of the topographic anatomy of the spine		
1.4	Features of the topographic anatomy of the pelvis and pelvic organs		
2	**Radiation diagnostics**		
2.1	X-ray anatomy of the osteoarticular system. age features.	2	**TC**
2.2	Radiation signs of bone damage	2	**TC**
2.3			
2.4			
3	**Osteoarticular phthisiology**		
3.1	Tuberculous spondylitis: detection, diagnosis, clinical manifestations, complications, treatment, prognosis.	2	**TC**
3.2	Tuberculosis of bones and joints: detection, diagnosis, clinical manifestations, complications, differential diagnosis, treatment, prognosis.	2	**TC**
4	**Rheumatology**		
4.1	Topical issues of osteoarthritis of large joints.	2	**TC**
4.2	Topical issues in inflammatory arthropathies of large joints.	2	**TC**
5	**Bone oncology**		
5.1	Principles of diagnosis and treatment of malignant tumors.	2	**TC**
5.2	Bone tumors.	2	**TC**
	Total	**28**	

Thematic plan of practical lessons

No.	Thematic plan	Watch	form of control
1	**Operative surgery and topographic anatomy**		

1.1	Features of the topographic anatomy of the upper limb.	2	**US, SZ, TC**
1.2	Features of the topographic anatomy of the lower limb.	2	**OI, SZ, TC**
1.3	Features of the topographic anatomy of the spine		
1.4	Features of the topographic anatomy of the pelvis and pelvic organs		
2	**Radiation diagnostics**		
2.1	X-ray anatomy of the osteoarticular system. Age features.	2	**OI, SZ, TC**
2.2	Radiation signs of bone damage	2	**OI, SZ, TC**
2.3			
2.4			
3	**Osteoarticular phthisiology**		
3.1	Tuberculous spondylitis: detection, diagnosis, clinical manifestations, complications, treatment, prognosis.	2	**OI, SZ, TC**
3.2	Tuberculosis of bones and joints: detection, diagnosis, clinical manifestations, complications, differential diagnosis, treatment, prognosis.	2	**OI, SZ, TC**
4	**Rheumatology**		
4.1	Topical issues of osteoarthritis of large joints.	2	**OI, SZ, TC**
4.2	Topical issues in inflammatory arthropathies of large joints.	2	**OI, SZ, TC**
5	**Bone oncology**		
5.1	Principles of diagnosis and treatment of malignant tumors.	2	**OI, SZ, TC**
5.2	Bone tumors.	2	**OI, SZ, TC**
	Total	**28**	

Special professional discipline 2nd year of study.

The scope of the discipline, types of educational work and forms of control

Theme	**Total hours**	**Classroom hours**		**Clinical practice**	**Forms of control**
		Lectures	**Practice**		
2nd year of study. Special professional discipline	**2308**	**54**	**54**	**2160**	
Topic # 1. Traumatology and orthopedics as a science of injuries and diseases of the musculoskeletal system. The main methods of treatment of trauma and orthopedic patients		2	2		Offset Oral interviews, filling out diaries
Topic number 2. General changes in the body during trauma. Traumatic illness.		2	2		Offset Oral interviews, solving situational

					problems, assessment of practical skills, filling out diaries
Topic number 3. Modern aspects of osteoporosis		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 4. Technologies of modern extramedullary, intramedullary and extrafocal osteosynthesis		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 5. Diagnostics, treatment and prevention of acute traumatological complications (PE, fat embolism, traumatic shock).		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 6. Closed soft tissue injuries: contusion, sprain, rupture, compression. Features of the introduction of trauma patients on an outpatient basis		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 7. Chest damage. Clinic. Treatment and rehabilitation.		2	2		Offset Oral

					interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 8. Blunt trauma to the abdomen. Symptoms. Complications. Treatment principles.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 9. Bleeding. Methods for stopping bleeding. Blood transfusion and blood substitutes.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 10. Damage to muscles, tendons, joint capsules		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 11. Damage to the flexor and extensor tendons of the fingers and toes. Clinic, diagnostics, treatment. Tendon suture technique.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out

					diaries
Topic number 12. Damage to the ligamentous apparatus of the knee joint. Damage to the menisci.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 13. Damage to the ligamentous apparatus of the ankle joint. Achilles tendon injury. Clinic, diagnostics, treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 14. Diagnosis and treatment of fractures in the elderly		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 15. Bone tissue regeneration.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 16. Nonunited fractures, false joints.		2	2		Offset Oral interviews, solving situational problems, assessment

					of practical skills, filling out diaries
Topic number 17. Traumatic dislocations of the upper limb. The mechanism of their occurrence. Principles of reduction and treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 18. Traumatic dislocation of the lower limb. The mechanism of their occurrence. Principles of reduction and treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 19. Open fractures and surgeon's tactics.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 20. Prolonged Compression Syndrome. Definition. Etiology, pathogenesis, clinical presentation (classification). Providing assistance at the pre-hospital stage. Inpatient treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 21. Gunshot wounds. The morphology of the gunshot wound. Classification. PST of a gunshot wound.		2	2		Offset Oral interviews, solving

					situational problems, assessment of practical skills, filling out diaries
Topic number 22. Gunshot fractures. Classification, features of the introduction of patients		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 23. Explosive injuries of the musculoskeletal system.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 24. Wounds and wound infections. Tetanus. Anaerobic infections		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 25. Felon. Classification. Cutaneous, subcutaneous, subungual, tendon, bone, pandactylitis. Clinic and treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number		2	2		Offset

26. Necrosis. Classification. Dry and wet necrosis.					Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 27. Gangrene. Trophic ulcers.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 28. Fundamentals of neurotraumatology. Types of traumatic brain injury. Diagnostics and treatment tactics for traumatic brain injury		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 29. Neuritis and neuropathy. Clinic. Diagnostics. Treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 30. CCMT. Brain concussion. Clinic. Diagnostics. Treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills,

					filling out diaries
Topic number 31. OTBI. Brain contusion. Clinic. Diagnostics. Treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 32. Anesthesia, intensive care and resuscitation in trauma patients.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 33. Traumatic shock. Classification. Pathogenesis, phases of traumatic shock. Inpatient anti-shock treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 34. Fundamentals and techniques of cardiopulmonary resuscitation in trauma patients (restoration of airway patency, mouth-to-mouth artificial respiration, mechanical ventilation, chest compressions, the concept of defibrillation)		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 35. Electrical trauma. Electric shock mechanisms. First aid for electrical injury.		2	2		Offset Oral interviews, solving situational problems,

					assessment of practical skills, filling out diaries
Topic number 36. Electrical trauma. Determination of the depth of the burn. General and local treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 37. Rehabilitation of traumatological patients in the conditions of the Research Institute of Balneology and Rehabilitation on an outpatient basis.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 38. Rehabilitation of traumatological patients in the conditions of the Research Institute of balneology and rehabilitation treatment in inpatient conditions. The main types of physiotherapy, exercise therapy.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries

Thematic plan of lectures and practical lessons for clinical residents of the 2nd year of study

Thematic plan of lectures

No.	Theme	number of hours
1	Traumatology and orthopedics as a science of injuries and diseases of the musculoskeletal system. The main methods of treatment of trauma and orthopedic patients	2
2	General changes in the body during trauma. Traumatic illness.	2

3	Modern aspects of osteoporosis	2
4	Technologies of modern extramedullary, intramedullary and extrafocal osteosynthesis	2
5	Diagnostics, treatment and prevention of acute traumatological complications (PE, fat embolism, traumatic shock).	2
6	Closed soft tissue injuries: contusion, sprain, rupture, compression. Features of the introduction of trauma patients on an outpatient basis	2
7	Chest damage. Clinic. Treatment and rehabilitation.	2
8	Blunt trauma to the abdomen. Symptoms. Complications. Treatment principles.	2
9	Bleeding. Methods for stopping bleeding. Blood transfusion and blood substitutes.	
10	Damage to muscles, tendons, joint capsules	2
11	Damage to the flexor and extensor tendons of the fingers and toes. Clinic, diagnostics, treatment. Tendon suture technique.	2
12	Damage to the ligamentous apparatus of the knee joint. Damage to the menisci.	2
13	Damage to the ligamentous apparatus of the ankle joint. Achilles tendon injury. Clinic, diagnostics, treatment.	2
14	Diagnosis and treatment of fractures in the elderly	2
15	Bone tissue regeneration.	2
16	Nonunited fractures, false joints.	2
17	Traumatic dislocations of the upper limb. The mechanism of their occurrence. Principles of reduction and treatment.	2
18	Traumatic dislocation of the lower limb. The mechanism of their occurrence. Principles of reduction and treatment.	2
19	Open fractures and surgeon's tactics.	2
20	Prolonged Compression Syndrome. Definition. Etiology, pathogenesis, clinical presentation (classification). Providing assistance at the pre-hospital stage. Inpatient treatment.	2
21	Gunshot wounds. The morphology of the gunshot wound. Classification. PHO of a gunshot wound.	2
22	Gunshot fractures. Classification, features of the introduction of patients	2
23	Explosive injuries of the musculoskeletal system.	2
24	Wounds and wound infections. Tetanus. Anaerobic infections	2
25	Felon. Classification. Cutaneous, subcutaneous, subungual, tendon, bone, pandactylitis. Clinic and treatment.	2
26	Necrosis. Classification. Dry and wet necrosis.	2
27	Gangrene. Trophic ulcers.	2

28	Fundamentals of neurotraumatology. Types of traumatic brain injury. Diagnostics and treatment tactics for traumatic brain injury	2
29	Neuritis and neuropathy. Clinic. Diagnostics. Treatment.	2
30	CCMT. Brain concussion. Clinic. Diagnostics. Treatment.	2
31	OTBI. Brain contusion. Clinic. Diagnostics. Treatment.	2
32	Anesthesia, intensive care and resuscitation in trauma patients.	2
33	Traumatic shock. Classification. Pathogenesis, phases of traumatic shock. Inpatient anti-shock treatment.	2
34	Fundamentals and techniques of cardiopulmonary resuscitation in trauma patients (restoration of airway patency, mouth-to-mouth artificial respiration, mechanical ventilation, chest compressions, the concept of defibrillation)	2
35	Electrical trauma. Electric shock mechanisms. First aid for electrical injury.	2
36	Electrical trauma. Determination of the depth of the burn. General and local treatment.	2
37	Rehabilitation of traumatological patients in the conditions of the Research Institute of Balneology and Rehabilitation on an outpatient basis.	2
38	Rehabilitation of traumatological patients in the conditions of the Research Institute of balneology and rehabilitation treatment in inpatient conditions. The main types of physiotherapy, exercise therapy.	2
	TOTAL	76

Thematic plan of practical lessons

No.	Theme	number of hours
1	Traumatology and orthopedics as a science of injuries and diseases of the musculoskeletal system. The main methods of treatment of trauma and orthopedic patients	2
2	General changes in the body during trauma. Traumatic illness.	2
3	Modern aspects of osteoporosis	2
4	Technologies of modern extramedullary, intramedullary and extrafocal osteosynthesis	2
5	Diagnostics, treatment and prevention of acute traumatological complications (PE, fat embolism, traumatic shock).	2
6	Closed soft tissue injuries: contusion, sprain, rupture, compression. Features of the introduction of trauma patients on an outpatient basis	2
7	Chest damage. Clinic. Treatment and rehabilitation.	2
8	Blunt trauma to the abdomen. Symptoms. Complications. Treatment principles.	2

9	Bleeding. Methods for stopping bleeding. Blood transfusion and blood substitutes.	
10	Damage to muscles, tendons, joint capsules	2
11	Damage to the flexor and extensor tendons of the fingers and toes. Clinic, diagnostics, treatment. Tendon suture technique.	2
12	Damage to the ligamentous apparatus of the knee joint. Damage to the menisci.	2
13	Damage to the ligamentous apparatus of the ankle joint. Achilles tendon injury. Clinic, diagnostics, treatment.	2
14	Diagnosis and treatment of fractures in the elderly	2
15	Bone tissue regeneration.	2
16	Nonunited fractures, false joints.	2
17	Traumatic dislocations of the upper limb. The mechanism of their occurrence. Principles of reduction and treatment.	2
18	Traumatic dislocation of the lower limb. The mechanism of their occurrence. Principles of reduction and treatment.	2
19	Open fractures and surgeon's tactics.	2
20	Prolonged Compression Syndrome. Definition. Etiology, pathogenesis, clinical presentation (classification). Providing assistance at the pre-hospital stage. Inpatient treatment.	2
21	Gunshot wounds. The morphology of the gunshot wound. Classification. PST of a gunshot wound.	2
22	Gunshot fractures. Classification, features of the introduction of patients	2
23	Explosive injuries of the musculoskeletal system.	2
24	Wounds and wound infections. Tetanus. Anaerobic infections	2
25	Felon. Classification. Cutaneous, subcutaneous, subungual, tendon, bone, pandactylitis. Clinic and treatment.	2
26	Necrosis. Classification. Dry and wet necrosis.	2
27	Gangrene. Trophic ulcers.	2
28	Fundamentals of neurotraumatology. Types of traumatic brain injury. Diagnostics and treatment tactics for traumatic brain injury	2
29	Neuritis and neuropathy. Clinic. Diagnostics. Treatment.	2
30	CCMT. Brain concussion. Clinic. Diagnostics. Treatment.	2
31	OTBI. Brain contusion. Clinic. Diagnostics. Treatment.	2
32	Anesthesia, intensive care and resuscitation in trauma patients.	2
33	Traumatic shock. Classification. Pathogenesis, phases of traumatic shock. Inpatient anti-shock treatment.	2

34	Fundamentals and techniques of cardiopulmonary resuscitation in trauma patients (restoration of airway patency, mouth-to-mouth artificial respiration, mechanical ventilation, chest compressions, the concept of defibrillation)	2
35	Electrical trauma. Electric shock mechanisms. First aid for electrical injury.	2
36	Electrical trauma. Determination of the depth of the burn. General and local treatment.	2
37	Rehabilitation of traumatological patients in the conditions of the Research Institute of Balneology and Rehabilitation on an outpatient basis.	2
38	Rehabilitation of traumatological patients in the conditions of the Research Institute of balneology and rehabilitation treatment in inpatient conditions. The main types of physiotherapy, exercise therapy.	2
	TOTAL	76

Thematic plan of lectures

No.	Theme	number of hours	form of control
1	Traumatology and orthopedics as a science of injuries and diseases of the musculoskeletal system. The main methods of treatment of trauma and orthopedic patients	2	TC
2	General changes in the body during trauma. Traumatic illness.	2	TC
3	Modern aspects of osteoporosis	2	TC
4	Technologies of modern extramedullary, intramedullary and extrafocal osteosynthesis	2	TC
5	Diagnostics, treatment and prevention of acute traumatological complications (PE, fat embolism, traumatic shock).	2	TC
6	Closed soft tissue injuries: contusion, sprain, rupture, compression. Features of the introduction of trauma patients on an outpatient basis	2	TC
7	Chest damage. Clinic. Treatment and rehabilitation.	2	TC
8	Blunt trauma to the abdomen. Symptoms. Complications. Treatment principles.	2	TC
9	Bleeding. Methods for stopping bleeding. Blood transfusion and blood substitutes.		TC
10	Damage to muscles, tendons, joint capsules	2	TC
11	Damage to the flexor and extensor tendons of the fingers and toes. Clinic, diagnostics, treatment. Tendon suture technique.	2	TC
12	Damage to the ligamentous apparatus of the knee joint. Damage to the menisci.	2	TC

13	Damage to the ligamentous apparatus of the ankle joint. Achilles tendon injury. Clinic, diagnostics, treatment.	2	TC
14	Diagnosis and treatment of fractures in the elderly	2	TC
15	Bone tissue regeneration.	2	TC
16	Nonunited fractures, false joints.	2	TC
17	Traumatic dislocations of the upper limb. The mechanism of their occurrence. Principles of reduction and treatment.	2	TC
18	Traumatic dislocation of the lower limb. The mechanism of their occurrence. Principles of reduction and treatment.	2	TC
19	Open fractures and surgeon's tactics.	2	TC
20	Prolonged Compression Syndrome. Definition. Etiology, pathogenesis, clinical presentation (classification). Providing assistance at the pre-hospital stage. Inpatient treatment.	2	TC
21	Gunshot wounds. The morphology of the gunshot wound. Classification. PST of a gunshot wound.	2	TC
22	Gunshot fractures. Classification, features of the introduction of patients	2	TC
23	Explosive injuries of the musculoskeletal system.	2	TC
24	Wounds and wound infections. Tetanus. Anaerobic infections	2	TC
25	Felon. Classification. Cutaneous, subcutaneous, subungual, tendon, bone, pandactylitis. Clinic and treatment.	2	TC
26	Necrosis. Classification. Dry and wet necrosis.	2	TC
27	Gangrene. Trophic ulcers.	2	TC
28	Fundamentals of neurotraumatology. Types of traumatic brain injury. Diagnostics and treatment tactics for traumatic brain injury	2	TC
29	Neuritis and neuropathy. Clinic. Diagnostics. Treatment.	2	TC
30	CCMT. Brain concussion. Clinic. Diagnostics. Treatment.	2	TC
31	OTBI. Brain contusion. Clinic. Diagnostics. Treatment.	2	TC
32	Anesthesia, intensive care and resuscitation in trauma patients.	2	TC
33	Traumatic shock. Classification. Pathogenesis, phases of traumatic shock. Inpatient anti-shock treatment.	2	TC
34	Fundamentals and techniques of cardiopulmonary resuscitation in trauma patients (restoration of airway patency, mouth-to-mouth artificial respiration, mechanical ventilation, chest compressions, the concept of defibrillation)	2	TC
35	Electrical trauma. Electric shock mechanisms. First aid for electrical injury.	2	TC

36	Electrical trauma. Determination of the depth of the burn. General and local treatment.	2	TC
37	Rehabilitation of traumatological patients in the conditions of the Research Institute of Balneology and Rehabilitation on an outpatient basis.	2	TC
38	Rehabilitation of traumatological patients in the conditions of the Research Institute of balneology and rehabilitation treatment in inpatient conditions. The main types of physiotherapy, exercise therapy.	2	TC
	TOTAL	76	

Legend: TC - test control

Thematic plan of practical lessons

No.	Theme	number of hours	form of control
1	Traumatology and orthopedics as a science of injuries and diseases of the musculoskeletal system. The main methods of treatment of trauma and orthopedic patients	2	OI, SZ, TC
2	General changes in the body during trauma. Traumatic illness.	2	OI, SZ, TC
3	Modern aspects of osteoporosis	2	OI, SZ, TC
4	Technologies of modern extramedullary, intramedullary and extrafocal osteosynthesis	2	OI, SZ, TC
5	Diagnostics, treatment and prevention of acute traumatological complications (PE, fat embolism, traumatic shock).	2	OI, SZ, TC
6	Closed soft tissue injuries: contusion, sprain, rupture, compression. Features of the introduction of trauma patients on an outpatient basis	2	OI, SZ, TC
7	Chest damage. Clinic. Treatment and rehabilitation.	2	OI, SZ, TC
8	Blunt trauma to the abdomen. Symptoms. Complications. Treatment principles.	2	OI, SZ, TC
9	Bleeding. Methods for stopping bleeding. Blood transfusion and blood substitutes.		OI, SZ, TC
10	Damage to muscles, tendons, joint capsules	2	OI, SZ, TC
11	Damage to the flexor and extensor tendons of the fingers and toes. Clinic, diagnostics, treatment. Tendon suture technique.	2	OI, SZ, TC

12	Damage to the ligamentous apparatus of the knee joint. Damage to the menisci.	2	OI, SZ, TC
13	Damage to the ligamentous apparatus of the ankle joint. Achilles tendon injury. Clinic, diagnostics, treatment.	2	OI, SZ, TC
14	Diagnosis and treatment of fractures in the elderly	2	OI, SZ, TC
15	Bone tissue regeneration.	2	OI, SZ, TC
16	Nonunited fractures, false joints.	2	OI, SZ, TC
17	Traumatic dislocations of the upper limb. The mechanism of their occurrence. Principles of reduction and treatment.	2	OI, SZ, TC
18	Traumatic dislocation of the lower limb. The mechanism of their occurrence. Principles of reduction and treatment.	2	OI, SZ, TC
19	Open fractures and surgeon's tactics.	2	OI, SZ, TC
20	Prolonged Compression Syndrome. Definition. Etiology, pathogenesis, clinical presentation (classification). Providing assistance at the pre-hospital stage. Inpatient treatment.	2	OI, SZ, TC
21	Gunshot wounds. The morphology of the gunshot wound. Classification. PST of a gunshot wound.	2	OI, SZ, TC
22	Gunshot fractures. Classification, features of the introduction of patients	2	OI, SZ, TC
23	Explosive injuries of the musculoskeletal system.	2	OI, SZ, TC
24	Wounds and wound infections. Tetanus. Anaerobic infections	2	OI, SZ, TC
25	Felon. Classification. Cutaneous, subcutaneous, subungual, tendon, bone, pandactylitis. Clinic and treatment.	2	OI, SZ, TC
26	Necrosis. Classification. Dry and wet necrosis.	2	OI, SZ, TC
27	Gangrene. Trophic ulcers.	2	OI, SZ, TC
28	Fundamentals of neurotraumatology. Types of traumatic brain injury. Diagnostics and treatment tactics for traumatic brain injury	2	OI, SZ, TC
29	Neuritis and neuropathy. Clinic. Diagnostics. Treatment.	2	OI, SZ, TC
30	CCMT. Brain concussion. Clinic. Diagnostics. Treatment.	2	OI, SZ,

			TC
31	OTBI. Brain contusion. Clinic. Diagnostics. Treatment.	2	OI, SZ, TC
32	Anesthesia, intensive care and resuscitation in trauma patients.	2	OI, SZ, TC
33	Traumatic shock. Classification. Pathogenesis, phases of traumatic shock. Inpatient anti-shock treatment.	2	OI, SZ, TC
34	Fundamentals and techniques of cardiopulmonary resuscitation in trauma patients (restoration of airway patency, mouth-to-mouth artificial respiration, mechanical ventilation, chest compressions, the concept of defibrillation)	2	OI, SZ, TC
35	Electrical trauma. Electric shock mechanisms. First aid for electrical injury.	2	OI, SZ, TC
36	Electrical trauma. Determination of the depth of the burn. General and local treatment.	2	OI, SZ, TC
37	Rehabilitation of traumatological patients in the conditions of the Research Institute of Balneology and Rehabilitation on an outpatient basis.	2	OI, SZ, TC
38	Rehabilitation of traumatological patients in the conditions of the Research Institute of balneology and rehabilitation treatment in inpatient conditions. The main types of physiotherapy, exercise therapy.	2	OI, SZ, TC
	TOTAL	76	

Curricula of general clinical related and fundamental disciplines for clinical residents 2 years of study.

Thematic plan of lectures

No.	Thematic plan	Watch
1	**Bone-purulent surgery**	
1.1	Osteomyelitis. Classification, diagnosis, clinic and treatment.	2
1.2	Purulent arthritis, classification, diagnosis, clinical picture and treatment.	2
1.3	Anaerobic infection. Diagnostics and surgical treatment.	2
1.4	Surgical sepsis. Classification. Theories of the development of sepsis. Diagnostics and treatment.	2
2	**Combustiology**	
2.1	Thermal lesions. Burns, classification of burns by the depth of the lesion, determination of the area of the burn (the rule of "palms", "nines"). General and local treatment.	2
2.2	Burn disease. Burn shock, classification by severity. Burn toxemia, pathogenesis, burn septic-toxemia. Clinic, diagnostics, treatment.	2
2.3	Fundamentals of types of dermal plastics. Surgical treatment of deep burns.	2

2.4	Frostbite. Clinical picture and pathogenesis. Treatment.	2
	Total	**16**

Thematic plan of practical lessons

No.	Thematic plan	Watch
1	**Bone-purulent surgery**	
1.1	Osteomyelitis. Classification, diagnosis, clinic and treatment.	2
1.2	Purulent arthritis, classification, diagnosis, clinical picture and treatment.	2
1.3	Anaerobic infection. Diagnostics and surgical treatment.	2
1.4	Surgical sepsis. Classification. Theories of the development of sepsis. Diagnostics and treatment.	2
2	**Combustiology**	
2.1	Thermal lesions. Burns, classification of burns by the depth of the lesion, determination of the area of the burn (the rule of "palms", "nines"). General and local treatment.	2
2.2	Burn disease. Burn shock, classification by severity. Burn toxemia, pathogenesis, burn septic-toxemia. Clinic, diagnostics, treatment.	2
2.3	Fundamentals of types of dermal plastics. Surgical treatment of deep burns.	2
2.4	Frostbite. Clinical picture and pathogenesis. Treatment.	2
	Total	**16**

Thematic plan of lectures

No.	Thematic plan	Watch	Forms of control
1	**Bone-purulent surgery**		
1.1	Osteomyelitis. Classification, diagnosis, clinic and treatment.	2	TC
1.2	Purulent arthritis, classification, diagnosis, clinical picture and treatment.	2	TC
1.3	Anaerobic infection. Diagnostics and surgical treatment.	2	TC
1.4	Surgical sepsis. Classification. Theories of the development of sepsis. Diagnostics and treatment.	2	TC
2	**Combustiology**		
2.1	Thermal lesions. Burns, classification of burns by the depth of the lesion, determination of the area of the burn (the rule of "palms", "nines"). General and local treatment.	2	TC
2.2	Burn disease. Burn shock, classification by severity. Burn toxemia, pathogenesis, burn septic-toxemia. Clinic, diagnostics, treatment.	2	TC
2.3	Fundamentals of types of dermal plastics. Surgical treatment of deep burns.	2	TC

2.4	Frostbite. Clinical picture and pathogenesis. Treatment.	2	TC
	Total	**16**	

Thematic plan of practical lessons

No.	**Thematic plan**	**Watch**	**form of control**
1	**Bone-purulent surgery**		
1.1	Osteomyelitis. Classification, diagnosis, clinic and treatment.	2	OI, SZ, TC
1.2	Purulent arthritis, classification, diagnosis, clinical picture and treatment.	2	OI, SZ, TC
1.3	Anaerobic infection. Diagnostics and surgical treatment.	2	OI, SZ, TC
1.4	Surgical sepsis. Classification. Theories of the development of sepsis. Diagnostics and treatment.	2	OI, SZ, TC
2	**Combustiology**		
2.1	Thermal lesions. Burns, classification of burns by the depth of the lesion, determination of the area of the burn (the rule of "palms", "nines"). General and local treatment.	2	US, SZ, TC
2.2	Burn disease. Burn shock, classification by severity. Burn toxemia, pathogenesis, burn septic-toxemia. Clinic, diagnostics, treatment.	2	OI, SZ, TC
2.3	Fundamentals of types of dermal plastics. Surgical treatment of deep burns.	2	OI, SZ, TC
2.4	Frostbite. Clinical picture and pathogenesis. Treatment.	2	OI, SZ, TC
	Total	**16**	

Special professional discipline 3rd year of study.

The scope of the discipline, types of educational work and forms of control

Theme	**Total hours**	**Classroom hours**		**Clinical practice**	**Forms of control**
		Lectures	**Practice**		
3rd year of study. Special professional discipline	**1776**	**74**	**74**	**1628**	
Topic # 1. Organization of orthopedic care in the Kyrgyz Republic. Issues of ethics and deontology in orthopedics.		2	2		Offset Oral interviews,

					filling out diaries
Topic number 2. Methods of examination of orthopedic patients.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 3. Principles of treatment for orthopedic patients.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 4. Old dislocation of the upper limb. Diagnostics and treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 5. Old dislocations of the lower		2	2		Offset

limb. Diagnostics and treatment.					Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 6. Degenerative-dystrophic diseases of the joints. Etiology and pathogenesis. Clinic. Treatment methods depending on the stage of the process and the nature of changes in the joints.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 7. Arthritis. Secondary osteoarthritis of the joints. Classification, diagnosis, clinic and treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 8. Ankylosing spondylitis. Classification, diagnosis, clinic and treatment.		2	2		Offset Oral interviews, solving

					situational problems, assessment of practical skills, filling out diaries
Topic number 9. Rheumatoid arthritis. Classification, diagnosis, clinic and treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 10. Endoprosthetics of large joints. Indications. Anesthesia. Methodology and technique.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 11. Endoprosthetics of the joints of the hand and foot. Indications. Anesthesia. Methodology and technique. Errors, complications and their prevention.		2	2		Offset Oral interviews, solving situational problems,

					assessment of practical skills, filling out diaries
Topic number 12. Errors in arthroplasty of large and small joints, complications and their prevention.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 13. Posture disorders. Treatment, symptoms, causes, diagnosis, prevention		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 14. Damage to the shoulder joint. Arthroscopic surgery.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills,

					filling out diaries
Topic number 15. Injuries in the knee joint. Arthroscopic meniscectomy, ACL plastic.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 16. Deformation of the feet. Flat feet, classification, longitudinal and transverse flat feet. Deviation of the 1st toe outward. The use of conservative and surgical methods of treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 17. The consequences of injuries (false joints, deformities and shortening of the limbs). Conservative and surgical methods of treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 18. The consequences of trauma		2	2		Offset

(contractures, ankylosis,). Conservative and surgical methods of treatment.					Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 19. Congenital diseases of the musculoskeletal system. Congenital dislocation of the hip. Theories of origin. Dysplasia of the hip joint. Clinic, diagnostics, treatment in children under 1 year old. Clinic, diagnostics, treatment. Conservative and surgical methods of treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 20. Congenital diseases of the musculoskeletal system. Congenital dislocation of the hip. Dysplasia of the hip joint. Clinic, diagnostics, treatment in children over 1 year old. Clinic, diagnostics, treatment. Conservative and surgical methods of treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 21. Congenital muscle torticollis. Clinical picture, diagnostics, differential diagnostics with neck deformities (Klippel-Feil disease, accessory cervical rib, high scapula, etc.). conservative and surgical treatment.		2	2		Offset Oral interviews, solving

					situational problems, assessment of practical skills, filling out diaries
Topic number 22. Congenital clubfoot. Clinic, diagnostics, treatment. Congenital deformities of the limbs.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 23. Clubhand diagnosis, treatment. Syndactyly, polydactyly, ectrodactyly, species.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 24. Prevention of congenital deformities.		2	2		Offset Oral interviews, solving situational problems,

					assessment of practical skills, filling out diaries
Topic number 25. Osteochondropathy. Etiology and pathogenesis. Osteochondropathy course and clinical manifestation.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 26. Acquired diseases of the musculoskeletal system. Cerebral palsy. Etiology, pathogenesis. Orthopedic methods of treating cerebral palsy. Methods of conservative and surgical treatment. Rehabilitation measures.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 27. The clinical picture of flaccid paralysis (consequences of poliomyelitis). Methods of conservative and surgical treatment. Rehabilitation measures.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills,

					filling out diaries
Topic number 28. Osteochondrosis, disc herniation. Classification, diagnosis, clinic, treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 29. Spondylitis classification, diagnosis, clinical picture, treatment. Classification, diagnosis, clinic, treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 30. classification, diagnosis, clinic, treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 31. Uncomplicated and complicated		2	2		Offset

spinal injuries. Clinic. Treatment and rehabilitation.					Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 32. Complicated spinal injuries. Clinic. Treatment and rehabilitation.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 33. Spinal anomalies classification, diagnosis, clinical picture, treatment.		2	2		Offset Oral interviews, solving situational problems, assessment of practical skills, filling out diaries
Topic number 34. Scoliosis. Etiology. Pathogenesis. Clinic. Prevention. Treatment: conservative, operative.		2	2		Offset Oral interviews, solving

					situation al problem s, assessm ent of practical skills, filling out diaries
Topic number 35. Rehabilitation of orthopedic patients in the conditions of the Research Institute of Balneology and Rehabilitation on an outpatient basis.		2	2		Offset Oral intervie ws, solving situation al problem s, assessm ent of practical skills, filling out diaries
Topic number 36. Rehabilitation of orthopedic patients in the conditions of the Research Institute of balneology and rehabilitation treatment in inpatient conditions. The main types of physiotherapy, exercise therapy.		2	2		Offset Oral intervie ws, solving situation al problem s, assessm ent of practical skills, filling out diaries
Topic number 37. Prosthetics in traumatology and orthopedics.		2	2		Offset Oral intervie ws, solving situation al problem s,

					assessment of practical skills, filling out diaries
TOTAL		74	74		

Thematic plan of lectures and practical lessons
for clinical residents of the 3rd year of study

Thematic plan of lectures

No.	Theme	Lectures number of hours
1	Organization of orthopedic care in the Kyrgyz Republic. Issues of ethics and deontology in orthopedics.	2
2	Methods of examination of orthopedic patients.	2
3	Principles of treatment for orthopedic patients.	2
4	Old dislocation of the upper limb. Diagnostics and treatment.	2
5	Old dislocations of the lower limb. Diagnostics and treatment.	2
6	Degenerative-dystrophic diseases of the joints. Etiology and pathogenesis. Clinic. Treatment methods depending on the stage of the process and the nature of changes in the joints.	2
7	Arthritis. Secondary osteoarthritis of the joints. Classification, diagnosis, clinic and treatment.	2
8	Ankylosing spondylitis. Classification, diagnosis, clinic and treatment.	2
9	Rheumatoid arthritis. Classification, diagnosis, clinic and treatment.	
10	Endoprosthetics of large joints. Indications. Anesthesia. Methodology and technique.	2
11	Endoprosthetics of the joints of the hand and foot. Indications. Anesthesia. Methodology and technique. Errors, complications and their prevention.	2
12	Errors in arthroplasty of large and small joints, complications and their prevention.	2
13	Posture disorders. Treatment, symptoms, causes, diagnosis, prevention	2
14	Damage to the shoulder joint. Arthroscopic surgery.	2
15	Injuries in the knee joint. Arthroscopic meniscectomy, ACL plastic.	2
16	Deformation of the feet. Flat feet, classification, longitudinal and transverse flat feet. Deviation of the 1st toe outward. The use of conservative and surgical	2

	methods of treatment.	
17	The consequences of injuries (false joints, deformities and shortening of the limbs). Conservative and surgical methods of treatment.	2
18	The consequences of trauma (contractures, ankylosis,). Conservative and surgical methods of treatment.	2
19	Congenital diseases of the musculoskeletal system. Congenital dislocation of the hip. Theories of origin. Dysplasia of the hip joint. Clinic, diagnostics, treatment in children under 1 year old. Clinic, diagnostics, treatment. Conservative and surgical methods of treatment.	2
20	Congenital diseases of the musculoskeletal system. Congenital dislocation of the hip. Dysplasia of the hip joint. Clinic, diagnostics, treatment in children over 1 year old. Clinic, diagnostics, treatment. Conservative and surgical methods of treatment.	2
21	Congenital muscle torticollis. Clinical picture, diagnostics, differential diagnostics with neck deformities (Klippel-Feil disease, accessory cervical rib, high scapula, etc.). conservative and surgical treatment.	2
22	Congenital clubfoot. Clinic, diagnostics, treatment. Congenital deformities of the limbs.	2
23	Clubhand diagnosis, treatment. Syndactyly, polydactyly, ectrodactyly, species.	2
24	Prevention of congenital deformities.	2
25	Osteochondropathy. Etiology and pathogenesis. Osteochondropathy course and clinical manifestation.	2
26	Acquired diseases of the musculoskeletal system. Cerebral palsy. Etiology, pathogenesis. Orthopedic methods of treating cerebral palsy. Methods of conservative and surgical treatment. Rehabilitation measures.	2
27	The clinical picture of flaccid paralysis (consequences of poliomyelitis). Methods of conservative and surgical treatment. Rehabilitation measures.	2
28	Osteochondrosis, disc herniation. Classification, diagnosis, clinic, treatment.	2
29	Spondylitis classification, diagnosis, clinical picture, treatment. Classification, diagnosis, clinic, treatment.	2
30	Spondylolisthesis classification, diagnosis, clinical picture, treatment.	
31	Uncomplicated and complicated spinal injuries. Clinic. Treatment and rehabilitation.	2
32	Complicated spinal injuries. Clinic. Treatment and rehabilitation.	2
33	Spinal anomalies classification, diagnosis, clinical picture, treatment.	2
34	Scoliosis. Etiology. Pathogenesis. Clinic. Prevention. Treatment: conservative, operative.	2
35	Rehabilitation of orthopedic patients in the conditions of the Research Institute of Balneology and Rehabilitation on an outpatient basis.	2
36	Rehabilitation of orthopedic patients in the conditions of the Research Institute of balneology and rehabilitation treatment in inpatient conditions. The main types of physiotherapy, exercise therapy.	2
37	Prosthetics in traumatology and orthopedics.	2

	TOTAL	**74**

Thematic plan of practical lessons

No.	Theme	Lectures number of hours
1	Organization of orthopedic care in the Kyrgyz Republic. Issues of ethics and deontology in orthopedics.	2
2	Methods of examination of orthopedic patients.	2
3	Principles of treatment for orthopedic patients.	2
4	Old dislocation of the upper limb. Diagnostics and treatment.	2
5	Old dislocations of the lower limb. Diagnostics and treatment.	2
6	Degenerative-dystrophic diseases of the joints. Etiology and pathogenesis. Clinic. Treatment methods depending on the stage of the process and the nature of changes in the joints.	2
7	Arthritis. Secondary osteoarthritis of the joints. Classification, diagnosis, clinic and treatment.	2
8	Ankylosing spondylitis. Classification, diagnosis, clinic and treatment.	2
9	Rheumatoid arthritis. Classification, diagnosis, clinic and treatment.	
10	Endoprosthetics of large joints. Indications. Anesthesia. Methodology and technique.	2
11	Endoprosthetics of the joints of the hand and foot. Indications. Anesthesia. Methodology and technique. Errors, complications and their prevention.	2
12	Errors in arthroplasty of large and small joints, complications and their prevention.	2
13	Posture disorders. Treatment, symptoms, causes, diagnosis, prevention	2
14	Damage to the shoulder joint. Arthroscopic surgery.	2
15	Injuries in the knee joint. Arthroscopic meniscectomy, ACL plastic.	2
16	Deformation of the feet. Flat feet, classification, longitudinal and transverse flat feet. Deviation of the 1st toe outward. The use of conservative and surgical methods of treatment.	2
17	The consequences of injuries (false joints, deformities and shortening of the limbs). Conservative and surgical methods of treatment.	2
18	The consequences of trauma (contractures, ankylosis,). Conservative and surgical methods of treatment.	2
19	Congenital diseases of the musculoskeletal system. Congenital dislocation of the hip. Theories of origin. Dysplasia of the hip	2

	joint. Clinic, diagnostics, treatment in children under 1 year old. Clinic, diagnostics, treatment. Conservative and surgical methods of treatment.	
20	Congenital diseases of the musculoskeletal system. Congenital dislocation of the hip. Dysplasia of the hip joint. Clinic, diagnostics, treatment in children over 1 year old. Clinic, diagnostics, treatment. Conservative and surgical methods of treatment.	2
21	Congenital muscle torticollis. Clinical picture, diagnostics, differential diagnostics with neck deformities (Klippel-Feil disease, accessory cervical rib, high scapula, etc.). conservative and surgical treatment.	2
22	Congenital clubfoot. Clinic, diagnostics, treatment. Congenital deformities of the limbs.	2
23	Clubhand diagnosis, treatment. Syndactyly, polydactyly, ectrodactyly, species.	2
24	Prevention of congenital deformities.	2
25	Osteochondropathy. Etiology and pathogenesis. Osteochondropathy course and clinical manifestation.	2
26	Acquired diseases of the musculoskeletal system. Cerebral palsy. Etiology, pathogenesis. Orthopedic methods of treating cerebral palsy. Methods of conservative and surgical treatment. Rehabilitation measures.	2
27	The clinical picture of flaccid paralysis (consequences of poliomyelitis). Methods of conservative and surgical treatment. Rehabilitation measures.	2
28	Osteochondrosis, disc herniation. Classification, diagnosis, clinic, treatment.	2
29	Spondylitis classification, diagnosis, clinical picture, treatment. Classification, diagnosis, clinic, treatment.	2
30	Spondylolisthesis classification, diagnosis, clinical picture, treatment.	
31	Uncomplicated and complicated spinal injuries. Clinic. Treatment and rehabilitation.	2
32	Complicated spinal injuries. Clinic. Treatment and rehabilitation.	2
33	Spinal anomalies classification, diagnosis, clinical picture, treatment.	2
34	Scoliosis. Etiology. Pathogenesis. Clinic. Prevention. Treatment: conservative, operative.	2
35	Rehabilitation of orthopedic patients in the conditions of the Research Institute of Balneology and Rehabilitation on an outpatient basis.	2
36	Rehabilitation of orthopedic patients in the conditions of the Research Institute of balneology and rehabilitation treatment in inpatient conditions. The main types of physiotherapy, exercise therapy.	2
37	Prosthetics in traumatology and orthopedics.	2
	TOTAL	**74**

Thematic plan of lectures

No.	Theme	Lectures number of hours	form of control
1	Organization of orthopedic care in the Kyrgyz Republic. Issues of ethics and deontology in orthopedics.	2	TC
2	Methods of examination of orthopedic patients.	2	TC
3	Principles of treatment for orthopedic patients.	2	TC
4	Old dislocation of the upper limb. Diagnostics and treatment.	2	TC
5	Old dislocations of the lower limb. Diagnostics and treatment.	2	TC
6	Degenerative-dystrophic diseases of the joints. Etiology and pathogenesis. Clinic. Treatment methods depending on the stage of the process and the nature of changes in the joints.	2	TC
7	Arthritis. Secondary osteoarthritis of the joints. Classification, diagnosis, clinic and treatment.	2	TC
8	Ankylosing spondylitis. Classification, diagnosis, clinic and treatment.	2	TC
9	Rheumatoid arthritis. Classification, diagnosis, clinic and treatment.		TC
10	Endoprosthetics of large joints. Indications. Anesthesia. Methodology and technique.	2	TC
11	Endoprosthetics of the joints of the hand and foot. Indications. Anesthesia. Methodology and technique. Errors, complications and their prevention.	2	TC
12	Errors in arthroplasty of large and small joints, complications and their prevention.	2	TC
13	Posture disorders. Treatment, symptoms, causes, diagnosis, prevention	2	TC
14	Damage to the shoulder joint. Arthroscopic surgery.	2	TC
15	Injuries in the knee joint. Arthroscopic meniscectomy, ACL plastic.	2	TC
16	Deformation of the feet. Flat feet, classification, longitudinal and transverse flat feet. Deviation of the 1st toe outward. The use of conservative and surgical methods of treatment.	2	TC
17	The consequences of injuries (false joints, deformities and shortening of the limbs). Conservative and surgical methods of treatment.	2	TC
18	The consequences of trauma (contractures, ankylosis,). Conservative and surgical methods of treatment.	2	TC
19	Congenital diseases of the musculoskeletal system. Congenital dislocation of the hip. Theories of origin. Dysplasia of the hip joint. Clinic, diagnostics, treatment in children under 1 year old. Clinic, diagnostics, treatment. Conservative and surgical methods of treatment.	2	TC

20	Congenital diseases of the musculoskeletal system. Congenital dislocation of the hip. Dysplasia of the hip joint. Clinic, diagnostics, treatment in children over 1 year old. Clinic, diagnostics, treatment. Conservative and surgical methods of treatment.	2	TC
21	Congenital muscle torticollis. Clinical picture, diagnostics, differential diagnostics with neck deformities (Klippel-Feil disease, accessory cervical rib, high scapula, etc.). conservative and surgical treatment.	2	TC
22	Congenital clubfoot. Clinic, diagnostics, treatment. Congenital deformities of the limbs.	2	TC
23	Clubhand diagnosis, treatment. Syndactyly, polydactyly, ectrodactyly, species.	2	TC
24	Prevention of congenital deformities.	2	TC
25	Osteochondropathy. Etiology and pathogenesis. Osteochondropathy course and clinical manifestation.	2	TC
26	Acquired diseases of the musculoskeletal system. Cerebral palsy. Etiology, pathogenesis. Orthopedic methods of treating cerebral palsy. Methods of conservative and surgical treatment. Rehabilitation measures.	2	TC
27	The clinical picture of flaccid paralysis (consequences of poliomyelitis). Methods of conservative and surgical treatment. Rehabilitation measures.	2	TC
28	Osteochondrosis, disc herniation. Classification, diagnosis, clinic, treatment.	2	TC
29	Spondylitis classification, diagnosis, clinical picture, treatment. Classification, diagnosis, clinic, treatment.	2	TC
30	Spondylolisthesis classification, diagnosis, clinical picture, treatment.		TC
31	Uncomplicated and complicated spinal injuries. Clinic. Treatment and rehabilitation.	2	TC
32	Complicated spinal injuries. Clinic. Treatment and rehabilitation.	2	TC
33	Spinal anomalies classification, diagnosis, clinical picture, treatment.	2	TC
34	Scoliosis. Etiology. Pathogenesis. Clinic. Prevention. Treatment: conservative, operative.	2	TC
35	Rehabilitation of orthopedic patients in the conditions of the Research Institute of Balneology and Rehabilitation on an outpatient basis.	2	TC
36	Rehabilitation of orthopedic patients in the conditions of the Research Institute of balneology and rehabilitation treatment in inpatient conditions. The main types of physiotherapy, exercise therapy.	2	TC
37	Prosthetics in traumatology and orthopedics.	2	TC
	TOTAL	**74**	

Legend: TC - test control

Thematic plan of practical lessons

No.	Theme	Lectures number of hours	form of control
1	Organization of orthopedic care in the Kyrgyz Republic. Issues of ethics and deontology in orthopedics.	2	US, SZ, TC
2	Methods of examination of orthopedic patients.	2	OI, SZ, TC
3	Principles of treatment for orthopedic patients.	2	OI, SZ, TC
4	Old dislocation of the upper limb. Diagnostics and treatment.	2	OI, SZ, TC
5	Old dislocations of the lower limb. Diagnostics and treatment.	2	OI, SZ, TC
6	Degenerative-dystrophic diseases of the joints. Etiology and pathogenesis. Clinic. Treatment methods depending on the stage of the process and the nature of changes in the joints.	2	OI, SZ, TC
7	Arthritis. Secondary osteoarthritis of the joints. Classification, diagnosis, clinic and treatment.	2	OI, SZ, TC
8	Ankylosing spondylitis. Classification, diagnosis, clinic and treatment.	2	OI, SZ, TC
9	Rheumatoid arthritis. Classification, diagnosis, clinic and treatment.		OI, SZ, TC
10	Endoprosthetics of large joints. Indications. Anesthesia. Methodology and technique.	2	OI, SZ, TC
11	Endoprosthetics of the joints of the hand and foot. Indications. Anesthesia. Methodology and technique. Errors, complications and their prevention.	2	OI, SZ, TC
12	Errors in arthroplasty of large and small joints, complications and their prevention.	2	OI, SZ, TC

13	Posture disorders. Treatment, symptoms, causes, diagnosis, prevention	2	OI, SZ, TC
14	Damage to the shoulder joint. Arthroscopic surgery.	2	OI, SZ, TC
15	Injuries in the knee joint. Arthroscopic meniscectomy, ACL plastic.	2	OI, SZ, TC
16	Deformation of the feet. Flat feet, classification, longitudinal and transverse flat feet. Deviation of the 1st toe outward. The use of conservative and surgical methods of treatment.	2	OI, SZ, TC
17	The consequences of injuries (false joints, deformities and shortening of the limbs). Conservative and surgical methods of treatment.	2	OI, SZ, TC
18	The consequences of trauma (contractures, ankylosis,). Conservative and surgical methods of treatment.	2	OI, SZ, TC
19	Congenital diseases of the musculoskeletal system. Congenital dislocation of the hip. Theories of origin. Dysplasia of the hip joint. Clinic, diagnostics, treatment in children under 1 year old. Clinic, diagnostics, treatment. Conservative and surgical methods of treatment.	2	OI, SZ, TC
20	Congenital diseases of the musculoskeletal system. Congenital dislocation of the hip. Dysplasia of the hip joint. Clinic, diagnostics, treatment in children over 1 year old. Clinic, diagnostics, treatment. Conservative and surgical methods of treatment.	2	OI, SZ, TC
21	Congenital muscle torticollis. Clinical picture, diagnostics, differential diagnostics with neck deformities (Klippel-Feil disease, accessory cervical rib, high scapula, etc.). conservative and surgical treatment.	2	US, SZ, TC
22	Congenital clubfoot. Clinic, diagnostics, treatment. Congenital deformities of the limbs.	2	OI, SZ, TC
23	Clubhand diagnosis, treatment. Syndactyly, polydactyly, ectrodactyly, species.	2	OI, SZ, TC
24	Prevention of congenital deformities.	2	OI, SZ, TC
25	Osteochondropathy. Etiology and pathogenesis. Osteochondropathy course and clinical manifestation.	2	OI, SZ, TC

26	Acquired diseases of the musculoskeletal system. Cerebral palsy. Etiology, pathogenesis. Orthopedic methods of treating cerebral palsy. Methods of conservative and surgical treatment. Rehabilitation measures.	2	OI, SZ, TC
27	The clinical picture of flaccid paralysis (consequences of poliomyelitis). Methods of conservative and surgical treatment. Rehabilitation measures.	2	OI, SZ, TC
28	Osteochondrosis, disc herniation. Classification, diagnosis, clinic, treatment.	2	OI, SZ, TC
29	Spondylitis classification, diagnosis, clinical picture, treatment. Classification, diagnosis, clinic, treatment.	2	OI, SZ, TC
30	Spondylolisthesis classification, diagnosis, clinical picture, treatment.		OI, SZ, TC
31	Uncomplicated and complicated spinal injuries. Clinic. Treatment and rehabilitation.	2	OI, SZ, TC
32	Complicated spinal injuries. Clinic. Treatment and rehabilitation.	2	OI, SZ, TC
33	Spinal anomalies classification, diagnosis, clinical picture, treatment.	2	OI, SZ, TC
34	Scoliosis. Etiology. Pathogenesis. Clinic. Prevention. Treatment: conservative, operative.	2	OI, SZ, TC
35	Rehabilitation of orthopedic patients in the conditions of the Research Institute of Balneology and Rehabilitation on an outpatient basis.	2	OI, SZ, TC
36	Rehabilitation of orthopedic patients in the conditions of the Research Institute of balneology and rehabilitation treatment in inpatient conditions. The main types of physiotherapy, exercise therapy.	2	OI, SZ, TC
37	Prosthetics in traumatology and orthopedics.	2	OI, SZ, TC
	TOTAL	**74**	

Legend: OI-Oral interview, SZ-decision SZ, TC-test control.

MEDICAL HANDLING / SKILLS

A clinical resident of a narrow specialty should be able to perform the following manipulations in the "Orthopedics" section independently:

No.	Skill name	Qty
1	Reposition of fractures, transport immobilization in case of injuries of the limbs and spine;	120-200
2	Reduction of dislocation of bones;	120-200
3	Applying a vascular suture and stopping bleeding in case of damage to the great vessels;	5-20
4	Removal of foreign bodies from soft tissues:	5-20
5	Primary and secondary debridement	20-50
6	Opening, sanitation and drainage of purulent processes (abscesses, phlegmon, panaritium, mastitis, etc.)	20-50
7	Puncture of the pleural cavity, pericardium, abdominal cavity and large joints and other types of biopsies	1-5
8	Digital rectal examination	5-20
9	Treatment of thermal burns of all degrees;	20-50
10	Ability to evaluate data from laboratory, biochemical, X-ray, ultrasound, CT and other studies	120-200
11	Suturing the tendon	1-5
12	Corrective osteotomy operations	10-20
13	Osteosynthesis of the external fixation apparatus and extraal plate	10-30
14	Arthrotomy	1-5
15	Sequestrectomy	10-20
16	Pleural puncture	30-50
17	Laparocentesis	10-20
18	Puncture and other types of biopsies	1-5
19	Digital rectal examination	60-100
20	Ability to evaluate data from laboratory, biochemical, X-ray, ultrasound, CT and other studies	120-200

Emergencies in surgery, in which the resident must be able to diagnose and provide first aid

1. Shock (anaphylactic, toxic, traumatic, hemorrhagic, cardiogenic, hypovolemic, septic, etc.).
2. Fainting. Collapse.
3. Coma (hypoglycemic, diabetic, cerebral, hepatic, unclear etiology, etc.).
4. Acute respiratory failure, apnea.
5. Severe attack of bronchial asthma, broncho-obstructive syndrome in adults.
6. Quincke's edema.
7. Pulmonary embolism.
8. Acute heart failure.
9. Acute disturbances in the rhythm and conduction of the heart.
10. Hypertensive crisis.
11. Unstable angina.
12. Myocardial infarction.
13. Hepatic and renal colic.
14. Bleeding.
15. Acute kidney injury.
16. Acute liver failure.
17. Acute adrenal insufficiency.
18. Lung edema.
19. Swelling of the brain.
20. Convulsive states, status epilepticus.
21. Psychomotor agitation. Panic attack. Acute stress response. Suicide.
22. Chemical and thermal burns, frostbite.
23. Electric shock, lightning, heat and sunstroke.
24. Poisoning, including psychoactive substances.
25. Drowning, strangulation.
26. Thyrotoxic crisis.
27. Preeclampsia, eclampsia.
28. Clinical death.
29. Bites and stings.
30. Acute arterial and venous obstruction.

31. Traumatic eye injuries, incl. foreign bodies.

Exam questions for residents by specialty

"Traumatology and Orthopedics"

1. N.N. Priorov's contribution to the development of traumatology and orthopedics.
2. Classification of injuries.
3. Children's injuries and ways to prevent them.
4. Features of the examination of patients with limb trauma.
5. Diagnosis of stable and unstable vertebral fractures in the cervical spine.
6. Methods of conservative treatment of fractures.
7. The axis of the upper limb, relative and absolute length of the lower limb.
8. Lower limb axis, relative absolute length of the upper limb.
9. Credible and probable signs of fracture.
10. The main methods of examination of adult children with injuries and diseases of the musculoskeletal system.
11. Features of X-ray diagnostics of traumatological and orthopedic patients.
12. The mechanism of injury, classification of dislocations of the clavicle.
13. Diagnosis and treatment of fractures of the transverse and spinous processes.
14. Mechanism of injury, classification of shoulder dislocations
15. Measure the range of motion in the hip joint.

16. How to measure the radio ulnar angle, what is it equal to in the norm? Types of shortening. Measure the functional shortening of the lower limb.
17. The mechanism of injury and classification of fractures of the clavicle and scapula.
18. The choice of the method of pain relief for dislocation reduction.
19. Indications for surgical treatment of clavicle fractures.
20. Features of the treatment of dislocation of the acromial end of the clavicle.
21. Diagnosis of complicated shoulder dislocations and fracture-dislocations.
22. Features of reduction of fracture-dislocations of the shoulder.
23. Transport immobilization using standard and improvised splints, bandages.
24. Compression-distraction osteosynthesis with Ilizarov, Kalinberz, Gudushuri, Volkov-Oganeyano devices.
25. Paranephral block according to Vishnevsky, indications, technique of execution, the amount of anesthetic.
26. What types of plaster casts do you know?
27. Cervical vagosympathetic blockade according to Vishnevsky. Indications, execution technique, amount of anesthetic.
28. Methods for repositioning fresh shoulder dislocations.
29. Measure the range of motion in the shoulder and elbow joints.
30. The mechanism of injury, classification of dislocations of the forearm.
31. Signs of lung damage from a closed chest injury.
32. The mechanism of injury and classification of fractures of the ribs and sternum.
33. Features of conservative and surgical treatment of floating (fenestrated) rib fractures.
34. Treatment of simple and multiple rib fractures.
35. Treatment of open, valvular tension pneumothorax.
36. Features of the examination of patients with chest trauma.
37. Technique for repositioning forearm dislocations.
38. Measure the range of motion in the knee and ankle joint.
39. Types of pneumothorax, classification, diagnosis of tension pneumothorax, treatment.
40. A functional method for the treatment of vertebral fractures in the thoracic and lumbar spine.
41. Prevention and treatment of posture defects.
42. Early diagnosis of scoliosis, types of treatment.
43. Classification. Pathogenesis. The degree of scoliosis.
44. Indications for surgical treatment of complicated spinal fractures.
45. Conservative treatment of scoliosis. Indications for surgical treatment.
46. Osteocondritis of the spine. Classification, etiology and pathogenesis.
47. Clinical picture, diagnostics of hip dislocations. Dislocation reduction technique.
48. Conservative treatment of pelvic fractures.
49. Peculiarities of revealing the dominant injury in case of multiple and associated injuries at the pre-hospital stage.
50. General principles - dressing technique. Errors.
51. Types of anesthesia with various methods of osteosynthesis.
52. Joint puncture, technique. The order of care for various types of polytrauma.
53. Skeletal traction. Purpose and application technique.
54. Features of examination of patients with multiple and associated injuries.
55. Features of the course of shock in polytrauma.
56. Signs of damage to the great vessels and nerves.
57. Technique of primary surgical treatment of open fractures of the leg and foot.
58. Technique of anesthesia for diaphyseal fractures of long bones.
59. Indications for the choice of methods for treating diaphyseal fractures of the lower leg.
60. Signs of irreversible ischemia.
61. Prevention and treatment of wound complications in fractures of the bones of the leg and foot.

62. Muscular torticollis. Definition of the concept. The importance of early diagnosis. Types of surgical interventions for muscle torticollis.
63. Clinical picture - X-ray picture of aseptic necrosis of the femoral head in adults.
64. Prevention of congenital hip dislocation.
65. Diagnosis of congenital hip dislocation in children of the second half of life and at an older age.
66. Clinical diagnosis of congenital hip dislocation in children during the first months of life.
67. Congenital dislocation of the hip, classification, etiology, pathogenesis.
68. Classification, mechanism of injury leading to dislocation of the hip.
69. Early X-ray diagnosis of congenital hip dislocation in children.
70. Functional treatment depending on the degree of congenital hip dislocation and the age of the child.
71. The technique of applying skeletal traction for the tuberosity of the tibia, for the calcaneus.
72. Signs of irreversible ischemia.
73. The mechanism of injury, clinical picture, diagnosis of fractures of the anatomical, surgical neck of the shoulder.
74. Indications for surgical treatment of congenital hip dislocation in children.
75. Suture technique and plastics of the Achilles tendon.
76. Clinical picture, diagnosis of diaphyseal fractures of the shoulder.
77. Diagnosis of secondary changes in the hip joint in the late stages of congenital hip dislocation.
78. Indications for surgical treatment of calcaneus fractures.
79. X-ray signs of a fracture.
80. Clinical picture, diagnosis of supramuscular fractures of the shoulder.
81. Etiopathogenesis. Stages of osteochondropathy. Diagnostic principles.
82. Clinic, diagnosis of the treatment of dislocation in the Chopard joint.
83. Clinical and radiological signs of fracture union.
84. Indications, methods of osteosynthesis of olecranon fractures.
85. Perthes disease. Clinic. X-ray diagnostics. Conservative treatment.
86. Clinical picture, diagnosis, treatment of dislocation in the Lisfranc joint.
87. Fractures of the ankles. Classification, mechanism of injury, treatment.
88. Valgus deviation of the first toe. Diagnostics. Conservative and surgical treatment.
89. Clinical and radiological signs of prolonged nonunion of the fracture and pseudarthrosis.
90. Treatment of fracture-dislocations of the forearm bones (damage such as Monteggi and Galecia).
91. Surgical treatment of osteochondropathy of the femoral head.
92. Technique of laparocentesis.
93. Classification, mechanism of fractures of the proximal femur.
94. Osgood-Schlatter disease. Diagnostics. Conservative treatment.
95. Intra-pelvic anesthesia according to Shkolnikov-Selivanov.
96. Methods of surgical treatment of fractures.
97. Indications for choosing a method for treating hip fractures.
98. Koenig's disease. Diagnostics. Conservative treatment. Surgical treatment of Koenig's disease in the "articular mouse" phase.
99. Compression syndrome of the chest. Clinic, diagnostics, treatment.
100. Extrafocal transosseous osteosynthesis with external fixation devices (types of apparatus).
101. Treatment of pelvic injuries of the Malgeny type. Treatment of acetabular injuries.
102. Classification, mechanism of trauma of diaphyseal hip fractures.
103. Diagnostics of the typical form of clubfoot in children of different age groups. Conservative treatment.
104. The mechanism of occurrence of the Dupuytren's fracture.
105. Indications for surgical treatment of diaphyseal hip fractures.

106. Indication for surgical treatment with clubfoot.
107. Characteristics of multiple, combined injuries of the musculoskeletal system.
108. Classification, mechanism of injury resulting in damage to the ligaments of the knee joint.
109. Longitudinal flat feet. Etiology. Pathogenesis. Diagnostics. Prevention. Treatment.
110. Clinic, diagnostics of meniscus injuries.
111. The mechanism of injury, classification of diaphyseal fractures of the shin bones.
112. Methods for examining bone tumors.
113. Etiology. Pathogenesis. Classification. Stages of osteoarthritis.
114. Diagnosis of osteoarthritis of large joints.
115. Methods for the treatment of diaphyseal fractures of the leg bones.
116. Peculiarities of treatment depending on the degree of the burn and the period of the clinical course of the burn disease.
117. Classification, diagnosis and clinical course of frostbite.

BIBLIOGRAPHY

1. Akzhigitov G.I. et al. Osteomyelitis. - M .: Medicine, 1986.
2. Ariev T.A. Thermal lesions. - L .: Medicine, 1966.
3. Baindurashvili A.G., Voloshin S.Yu., Krasnov A.I. Congenital dislocation of the hip in infants: clinical diagnosis, conservative treatment. - SPb. SpetsLit, 2012 .-- 95 p.
4. Burgener F.A., Cormano M., Pudas T. Radiation diagnosis of diseases of bones and joints: a guide-atlas. Per. in eng. V.V. Pozharsky; ed. C.K. Ternovy, A.I. Shekhter. - M .: GEOTAR-Media, 2011 .-- 552 p.
5. Boychev et al. Operative orthopedics and traumatology. Sofia, 1961.
6. Welsher Leonid Zinovievich. Clinical oncology. Selected lectures: textbook / LZ Welsher, BI Polyakov, S.B. Peterson. - M: "GEOTAR - Media", 2009. - 486s .: ill. Bibliography 485-486.
7. Vikhrev B.S. et al. Local cold lesions. - L .: Medicine, 1991.
8. Volkov M.V. et al. Errors and complications in the treatment of fractures. - M .: Medicine, 1970.
9. Volkov M.V., Dedova V.D. Children's orthopedics. - M .: Medicine, 1979.
10. Harmful R.R. A practical guide to orthopedics. L.; M., 1930.
11. Gusev E.I., Konovalov A.N., Skvortsova V.I. Neurology and neurosurgery. M., 2010, T. 1, T 2.
12. Diagnostics and treatment of injuries / Ed. SOUTH. Shaposhnikov. - M .: Medicine, 1984.
13. Dzhumabekov S.A., Sulaimanov Zh.D., et al. "Surgical treatment of posttraumatic spinal stenosis" Bishkek, 2011
14. Dzhumabekov S.A., Anarkulov B.S., "Classification of fractures of the long bones of the skeleton" Bishkek, 2012
15. Dzhumabekov S.A., Mirjalilov V.M., et al. "Immobilization of bones and joints" Bishkek, 2013
16. Doherty M., Doherty D. Clinical diagnosis of joint diseases. Minsk: Tivali, 1993.
17. Zeman M. Technique of applying bandages St. Petersburg. Peter, 1994.
18. Irger I.M. Neurosurgery. - M .: Medicine, 1961.
19. Kazmin A.I. et al. Scoliosis. Pathogenesis and treatment. Moscow: Medicine, 1981.
20. Kligunenko E.N., "Intensive therapy of burn disease" Moscow, 2009
21. Klyachkin L.M., Pinchuk V.M., "Burn disease", M-1969
22. Kovanov V.V., Travin A.A. Surgical anatomy of the limbs. M .: Medicine, 1983.
23. Kozhokmatov S.K., Kudaykulov M.K. G.S. Kozhakmatova Exogenous osteomyelitis. Tutorial. Bishkek. 1997.

24. S.K. Kozhokmatov Treatment of injuries of the hip joint and their consequences. Bishkek. 1997.
25. Kollontai Yu.E. et al. Open injuries to the hand. Kiev: Health, 1983.
26. A.A. Kardanov Forefoot surgery in diagrams and drawings. - M .: Publishing house "Medpraktika-M", 2012. - 144 p.
27. Kornilov N.V., Gryaznukhin E.G. Medical assistance in case of accidents and natural disasters. SPb, 1992.
28. Kornilov N.V., "Traumatology and Orthopedics" St. Petersburg, 2001
29. Kornilov N.V., Gryaznukhin E.G. Traumatological and orthopedic care in the clinic. SPb. Hippocrates, 1994.
30. Kotelnikov G.P., Chernov A.P., "Surgical correction of knee joint deformities" Samara, 1999
31. Kosinskaya I.S. Degenerative-dystrophic lesions of the osteoarticular apparatus. Moscow: Medicine, 1961.
32. Kosh R. Bone surgery. Budapest: Hungarian Academy of Sciences, 1966.
33. V.V. Klyuchevsky Skeletal traction - L .: Medicine. 1991.
34. Krasnov A.F. Miroshnichenko V.F. E.L. Kotelnikov Traumatology. - M .: Medicine. 1995.
35. Krasnov A.F. Outpatient traumatology: Textbook. allowance. - Kuibyshev, 1983.
36. Krasnov A.F. et al. Handbook of traumatology. - M .: Medicine, 1984.
37. Krieghoff R. Orthopedics. - M .: Medicine, 1984.
38. Kuzin M.I., Kostyuchenko B.M. Wounds and wound infection. - M .: Medicine, 1981.
39. Malova M.I. Clinical and functional research methods in traumatology and orthopedics. - M .: Medicine, 1984.
40. Marx V.O. Orthopedic diagnostics: Guidebook. Minsk, 1978.
41. Movshovich I.A. Operative orthopedics. - M .: Medicine, 1983.
42. Mironov S.P., Kotelnikov G.P., "Traumatology, national leadership" Moscow, 2008
43. Mikhailov L.K. Emergency traumatology M .: Dialect LLC, 2012
44. Nikitin G.D. Gryaznukhin E.G. Multiple fractures and associated injuries. - L .: Medicine. 1983.
45. Orthopedics. National leadership. Ed. S.P. Mironova, G.P. Kotelnikov. 2010.
46. Operative Surgery / Ed. Dittmann. - Budapest: Acad. Sciences of Hungary, 1981.
47. Organization of emergency medical aid to the population in case of natural disasters and other emergencies: Ed. V.V. Meshchkov. M., 1992.
48. Osteosynthesis: A Guide for Physicians / Ed. S.S. Tkachenko. - L .: Medicine, 1987.
49. Pozharsky V.F. Polytrauma of the musculoskeletal system and their treatment at the stages of medical evacuation. - M .: Medicine, 1989.
50. Revell P.A. Bone pathology. - Medicine, 1993.
51. Reinberg S.A. X-ray diagnostics of bone and joint diseases. - M .: Medicine, 1964.
52. Rozhinsky M.M. Mirjalilov V.M. Methods of examination of traumatological and orthopedic patients. 2006.
53. Guide to Neurotraumatology - Ed. A.I. Arutyunov. - M .: Medicine, 1979.
54. Guide to Traumatology and Orthopedics. - M .: Medicine, 1968. Vol. 1-3.
55. Skoblin A.P. et al. A guide to practical exercises in traumatology and orthopedics. - M .: Medicine, 1975.
56. Sagymbaev MA, "Diagnostics and treatment of early traumatic complications of closed chest injuries" Bishkek, 2007
57. A.P. Sereda, A.A. Gritsyuk, K.B. Zelenyak, A.B. Serebryakov. Risk factors for infectious complications after knee arthroplasty. // J. "Infections in surgery" //, 2010, Volume 8, No. 4, pp. 67 - 76.
58. Sokolov A.V. Traumatology department of the polyclinic. - M., 1989.
59. Tkachenko S.S., Demyanov V.M. Extrafocal osteosynthesis with compression-distraction devices for bone fractures and their complications. - L .: Medicine, 1974.

60. Tkachenko S.S. Military traumatology and orthopedics. - L .: 1985.
61. Ugryumov V.M., Babichenko E.I. Closed injuries of the spine and spinal cord. –L .: Medicine, 1973.
62. Freidlin S.Ya. Prevention of injuries and the organization of trauma care. - L. Medgiz, 1963.
63. Tsivyan Ya.L. Spine surgery. - M .: Medicine, 1966.
64. Chernavsky V.A., Abdurazakov U.A., "Diagnostics and treatment of fractures and dislocations" Almaty, 2001
65. Cherkes-Zade D.I., Kamenev Yu.F. Treatment of pelvic fractures in polytrauma. -Tbilisi. 1990.
66. Shaposhnikov Yu.G., Maslov V.I. Military field surgery. - M .: Medicine, 1995.
67. Shkolnikov L.G. et al. Injury to the pelvis and pelvic organs. - M .: Medicine, 1966.
68. Shabalov N.P., "Childhood Diseases" Moscow 2002
69. Yumashev G.S., Epifanov V.A. Operative traumatology and rehabilitation of patients with injuries of the musculoskeletal system. - M .: Medicine, 1983.
70. Yumashev G.S., Silin L.L. Damage to the vertebral bodies, intervertebral discs and ligaments. - Tashkent: Medicine, 1971.
71. Yumashev G.S., Furman M.E. Osteochondrosis of the spine. - M .: Medicine, 1984.
72. D.K. Yazykov Differential diagnostics in the clinic of traumatology and orthopedics. M .: Medgiz, 1963.

Optional disciplines (Humanities and educational block)

The resident independently chooses the discipline of the elective course and is trained in the specialty. Having chosen an elective course the resident writes application addressed to the head of the department and the dean's office of the PDMO, and is assigned to the department meetings.

4.4. Curriculum of elective disciplines

	Optional disciplines (humanitarian and general education block) out of 4 choose 3	**14.4**	**432**	**nine**
1	Istanbul Protocol (August 9, 1999)	4.8	144	3
2	Ministry of Emergency Situations	4.8	144	3
3	pedagogy and psychology	4.8	144	3
4	Public health	4.8	144	3

Ministry of Health of the Kyrgyz Republic
Ministry of Education and Science of the Kyrgyz Republic
Kyrgyz State Medical Academy named after I.K. Akhunbaeva

Approve
Rector of KSMA named after I.K. Akhunbaeva,
MD, prof. Kudaibergenova I.O.

_____
"____" _____ 2021

Training program
on the elective course: "Emergency Medicine"for the main professional residency program in the specialty: "Traumatologist, orthopedist"

Full-time form of education
Year of study -3rd year of residency
Labor intensity - 4.8 credit hours (144 hours)
Duration - 3 weeks.

No.	Type of educational work	Total hours
1	Total labor intensity	144
2	Lectures	6
3	Seminars	6
4	Practice	132
5	Control type	offset

Bishkek -2021

Annotation

The task of improving the quality of medical services is a priority for many countries of the world and requires constant efforts to update knowledge, strengthen the theoretical and practical training of specialists. This is due to the constant increase in the number of injuries, which can be called a "traumatic epidemic". To solve this medical and social problem, scientists around the world are taking measures to improve assistance to victims. The treatment tactics for polytrauma has changed. The most advanced methods of treating bone fractures and joint injuries have been developed. As a result, there is a need to search for new ways and methods for mastering the material in the postgraduate training of a traumatologist-orthopedist.

At present, such an important section of the training of students and specialist doctors as extreme surgery, together with all military medicine, is going through a difficult period.

At the same time the task of designing and developing new received - ciples of medical support troops and civilians in time of war and in emergency situations in peacetime become more difficult. This is evidenced by the growing interest in these problems, as well as the emergence of a new section of emergency care, designated at scientific conferences in recent years by different terms, such as "surgery for extreme conditions of the body", "military-city surgery" or, in general, "military-extreme medicine".

In recent years, guidelines for health care in emergencies have been developed. In the health care system, special services have been created: for peacetime - a disaster medicine service, and in wartime - a civil defense service.

Explanatory note

The purpose of training a resident in the specialty "Traumatology and Orthopedics". Training of a qualified specialist traumatologist, orthopedist, possessing a system of general cultural and professional competencies, capable and ready for independent professional activity in the context of specialized, including high-tech, medical care.

Tasks:

1. To conduct differential diagnosis of emergency conditions in traumatology and orthopedics, provide emergency assistance in emergency situations

2. To provide primary health care for emergencies, and conduct medical evacuation.

3 . To arrange effective triage of the sick and wounded in emergencies

The place of the discipline in the structure of BPEP is an elective course, designed for 3 weeks, 144 academic hours, 4.8 credit hours; to study this academic discipline, knowledge, skills and abilities are required, formed by the previous level of education in the specialty "medicine" - qualification "doctor - textbook "or in the specialty" pediatrics "- qualification" doctor-pediatrician "for all specialties.

Residents who have mastered the discipline are trained fot the following types of professional activities:

- diagnostic
- medical
- rehabilitation

- organizational and managerial

As a result of mastering the discipline "Emergency Medicine", the student must have: The following universal competencies: descriptive, analysis, synthesis (UC-1);

The following professional competencies:

Diagnostic activity :

- readiness to determine pathological conditions, symptoms, syndromes of diseases, nosological forms in patients in accordance with the International Classification of Diseases and Problems Related to Health (PC-5)
- readiness to manage and treat patients in need of trauma medical care (PC-6);
- readiness to provide emergency medical care to patients with injuries and diseases of the musculoskeletal system, work in emergency situations, participation in medical evacuation (PC-7);

Medical activity:

Rehabilitation activities

Organizational and managerial activities:

- readiness to apply the basic principles of organization and management in the healthcare sector, medical organizations and their structural units (PC-10).
- readiness to participate in assessing the quality of medical care using the main medical and statistical indicators (PC 11).
- readiness to provide medical assistance in emergency situations, incl. participation in medical evacuation (PC 12)

No.	code	Content of competence	As a result of studying the academic discipline, students must:
1.	UC-1	Readiness for abstract thinking, analysis, synthesis	Know: the basics of abstract thinking, analysis, synthesis Be able to: think abstractly, analyze, synthesize Possess: the basics of abstract thinking, analysis, synthesis
2.	PC-5	readiness to identify pathological conditions, symptoms, disease syndromes, nosological forms in patients in accordance with the International classification of diseases and health problems	Know: Semiotics of Trauma and Orthopedic diseases, diagnostic criteria, fundamentals of interpretation of laboratory and instrumental examination data, taking into account modern ideas about the pathology of the musculoskeletal system, the basics of the international classification of diseases, clinical guidelines of the leading communities of traumatologists, orthopedists Be able to: Interpret the data of laboratory and instrumental research in traumatology and orthopedics Possess: Skills of examining a patient with injuries and orthopedic pathology

3.	PC-6	willingness to manage and treat patients requiring trauma care	Know: Etiology, pathogenesis and clinic of major injuries and orthopedic diseases, methods diagnostics of musculoskeletal pathology, including laboratory (hormonal, biochemical studies, clinical laboratory methods, ELISA, high performance liquid chromatography), instrumental (Ultrasound, ECG), radiological (including radioisotope, CT, MRT), peculiarities of the organization and maintenance of qualified care for patients with trauma and orthopedic pathology Be able to: Determine the indications and feasibility of ultrasound, radioisotope, imaging studies (CT, MRT), choose an adequate examination algorithm and treatment. Possess: the skills of diagnosing and treating diseases of the musculoskeletal system, methods of monitoring the therapy.
4.	PC-7	readiness to provide emergency medical care to patients with injuries and musculoskeletal pathology, work in emergency situations, participation in medical evacuation readiness for	Know: Etiology, pathogenesis, clinical picture of emergency conditions in traumatology and orthopedics, methods of diagnosis and treatment. To be able to: Conduct a differential diagnosis of emergency conditions in traumatology and orthopedics, provide emergency care, incl. v Emergency situations Possess: Skills in diagnosis and treatment of emergency conditions in traumatology and orthopedics.
5.	PC-8	readiness to use natural healing factors, non-drug therapy, herbal medicine and other methods in patients in need of medical rehabilitation and spa treatment	Know: The basics of rehabilitation and balneology, the basics of general human pathology, immunobiology and the reactivity of the body. Be able to : Choose a medical and rehabilitation institution equipped with the necessary complex of rehabilitation measures, corresponding to the disease; choose additional methods of non-drug therapy. Possess: Knowledge of non-drug therapy, methods of rehabilitation for injuries and orthopedic diseases, techniques and their use in the clinical practice of a traumatologist,

			orthopedist.
6.	PC-10	readiness to apply the basic principles of organization and management in the healthcare sector, medical organizations and their structural units.	Know: Fundamentals of Legislation on Health Care and policy documents that govern the activities of health authorities and institutions. Be able to : Organize in medical organizations and their structural units favorable conditions for the stay of patients and work activities of medical personnel. Own: Experience in managerial work, experience in the distribution of staff responsibilities in time and place, control over the implementation of these duties.
7.	PC-11	willingness to participate in assessing the quality of medical care using the main medical and statistical indicators	Know: Modern ideas about the quality and defect of medical care, legislative acts of the Kyrgyz Republic in the standard of expert assessment. Be able to : Determine the correctness of the choice of medical technology, the degree of achievement of the planned result. Possess : Knowledge of non-drug therapy, methods of rehabilitation of traumatological diseases, techniques and their use in the clinical practice of a traumatologist, orthopedist.
eight.	PC-12	readiness to provide medical assistance in emergency situations, incl. participation in medical evacuation	Know: The basics of the organization and tactics of specialized medical units services in emergency situations, military operations. Be able to: Organize an effective medical sorting of the sick and wounded. Possess: Skills and provision of planned and Emergency care.

The results of mastering the discipline: at the end of the study of this discipline, the resident should have knowledge in:

1. prevention, diagnosis, clinical picture and treatment of injuries and diseases of the musculoskeletal system of all localizations and their complications in adults and children.
2. the main possible errors in the treatment of orthopedic and trauma patients;
3. the criteria for assessing work capacity and rehabilitation
orthopedic and trauma patients;
4. classification of injuries and injuries

Be able to:

1.diagnose damage of various localization; to identify the etiology and pathogenesis of diseases of the musculoskeletal system;

2. determine the types and methods of treatment of injuries;
3. diagnose general and specific complications;
4. strictly follow the principles of fracture treatment;
5. perform local anesthesia;
6. apply the knowledge of anatomy, cytology and physiology of organs and systems of the body in relation to their function in health and disease;
7. use knowledge of basic physical, chemical, biological and physiological laws, processes and phenomena in health and disease;
8.work with medical and diagnostic equipment

Master:

1.mathematical methods for solving professional problems
and work with computers;
2. closed reduction of fractures and reduction of dislocations;
3. the technique of applying plaster casts;
4. performing immersion osteosynthesis for uncomplicated fractures;
5. knowledge of external fixation devices and the technique of applying the Ilizarov apparatus;
6. keeping medical records, methods of calculating and analyzing the performance indicators of a traumatologist-orthopedist.

The complexity of mastering the curriculum of the discipline:

Name of the discipline	Distribution of curriculum time by type of occupation		
	Total labor intensity according to GOS		
	in credit units	in hours	weeks
Emergency Medicine (elective)	4.8	144	3

Distribution of hours per week by type of study
(lectures, seminars)

No. weeks	Classroom part ten %			Practice 90%	Total 100%	In credits
	Topic name	Lectures (academic hours)	Seminars (academic hours)			
1.		6 h	6 h	132	144	4.8
	Types of disasters. Stages of medical evacuation. The volume of medical care at the stages of evacuation.	2		44	48	1.6
	Sorting of patients at all stages of honey, evacuation. The continuity of the medical staff in the provision of medical care in the relevant medical centers.		2			

2.	Gunshot wounds. The morphology of the gunshot wound. Classification. PST of a gunshot wound.	2		44	48	1.6
	Damage zones for gunshot wounds. The practical value of knowing the zones of soft tissue damage. The main stages of PST. Factors affecting the development of complications in the wound.		2			
3	Prolonged crush syndrome (PCS)	2		44	48	1.6
	Pathogenesis of PCS. The periods of the clinical course of PCS. The scope of assistance at the stages of medical evacuation		2			
	Total	6 h	6 h	132	144	4.8

Thematic plan of lectures for residents of narrow specialties in the block "Emergency Medicine".

No.	Lecture title	watch	Pharma control
1	Types of disasters. Stages of medical evacuation. The volume of medical care at the stages of evacuation.	2	Elective course
2	Gunshot wounds. The morphology of the gunshot wound. Classification. PHO of a gunshot wound.	2	Elective course
3	Prolonged crush syndrome	2	Elective course
	Total	6 h	offset

Thematic plan of seminars for residents of narrow Specialties in the block "Emergency Medicine".

No.	Name of the workshop	Watch	form of control
1	Sorting of patients at all stages of honey, evacuation. The continuity of the medical staff in the provision of medical care in the relevant medical centers.	2	Elective course
2	Damage zones for gunshot wounds. The practical value of knowing the zones of soft tissue damage. The main stages of PST. Factors affecting the development of complications in the wound.	2	Elective course
3	Pathogenesis of PCS. The periods of the clinical course	2	Elective course

	of PCS. The scope of assistance at the stages of medical evacuation		
	Total	6 h	offset

Thematic plan of practical lessons
for residents of narrow specialties in
"Emergency Medicine".

No. weeks	Practical name classes	watch	
1	Preparing patients for triage and evacuation at all stages. The continuity of the medical staff in the provision of medical care in the relevant medical centers. Preparing the patient for the primary surgical treatment of the wound at the stage of qualified medical care.	44 h.	Elective course
2	Examination of patients with gunshot injuries to the extremities. Mine-explosive injury. The practical value of knowing the zones of soft tissue injury in mine-explosive injury.	44 h.	Elective course
3	Rules for rendering first aid to victims when removing the victim from the rubble.	44 h.	Elective course
	total	132 h.	offset

Contents of the program

Lectures:

Topic # 1. Types of disasters. Stages of medical evacuation. The volume of medical care at the stages of evacuation.
Topic number 2. Gunshot wounds. The morphology of the gunshot wound. Classification. PST of a gunshot wound.
Topic number 3. Prolonged Compression Syndrome. Clinic. Treatment.

Seminars:

Topic # 1. Sorting of patients at all stages of honey, evacuation. The continuity of the medical staff in the provision of medical care in the relevant medical centers.
Topic number 2. Damage zones for gunshot wounds. Practical
the value of knowing the zones of soft tissue damage. The main stages of PST. Factors affecting the development of complications in the wound.
Topic number 3. Pathogenesis of PCS. The periods of the clinical course of PCS.
The amount of assistance at the stages of medical evacuation

Practical lessons:

Topic # 1 Preparing patients for triage and evacuation at all stages. The continuity of the medical staff in the provision of medical care in the relevant medical centers.
Preparing the patient for the primary surgical treatment of the wound at the stage of qualified medical care.
Topic №2 Examination of patients with gunshot injuries of the extremities. Mine-explosive injury. The practical value of knowing the zones of soft tissue injury in mine-explosive injury.

Topic number 3. Rules for rendering first aid to victims when removing the victim from the rubble.

Control questions

1. Definition of "Disaster Medicine"?

2. Types of disasters

3. Medical evacuation stage?

4. What includes the scope of assistance at the scene.

5.types of temporary stopping of bleeding

6. Rules and technique for applying Esmarch's hemostatic tourniquet

7. In what position do we transport a victim with a fracture of the pelvic bones?

8. Morphology of a gunshot wound (damage zone)

9. Classification of gunshot wounds.

10. The main stages of the primary surgical treatment of a gunshot wound.

11. When PSO is not shown.

12. How to properly remove the victim from the rubble, depending on the time?

Main literature:
1. Disaster surgery. Musalatov Kh.A., 1998
2. Military field surgery. Shaposhnikov Yu.G., Maslov
3. Military field surgery. Humanenko E.K., 2009

Follow-up tests

1. What kind of wounded are allocated to the group in need of urgent measures of qualified surgical care in the medical center?
1. Wounded in the head, chest with pneumothorax, abdomen, pelvis, thigh, large joints
2. Wounded with ongoing internal and external bleeding, in a state of asphyxia, shock, with open and tense pneumothorax, with a tourniquet, with penetrating wounds and closed abdominal injuries, with intraperitoneal ruptures of the bladder and rectum, with avulsion of the extremities
3. Wounded with suspicion of tetanus, anaerobic infection, wound suppuration, injury to the forearm, lower leg, soft tissues of the thigh, etc.
4. Wounded with suspected tetanus development, wound suppuration, injury to the forearm, lower leg, soft tissues of the thigh, etc.
5. Wounded with suspicion of developing anaerobic infection, injury to the shoulder, lower leg, soft tissues of the thigh, etc.

Answer: 2.

2 .. **The result of triage is realized:**
1. Sorting mark
2. Sorting token
3. Written on the forehead
4. By clothes
5. By age
Answer: 1.

3. Indicate the level of training of medical workers corresponding to the possibility of providing first aid to the wounded:
1. Doctor
2. Doctor-surgeon
3. Traumatologist, thoracic surgeon, etc.
4. Doctor anesthesiologist
5. Paramedic
Answer: 1

4. Indicate the level of training of medical workers corresponding to the possibility of providing qualified surgical care
1. Doctor
2. Doctor-surgeon
3. Specialist doctor (traumatologist, thoracic surgeon, angiosurgeon, etc.)
4. Doctor-anesthesiologist
5. Dentist
Answer: 2.

5. Which of the following injuries are in second place when sending the wounded to the operating room?
1.circular burn scab for necrotomy
2.ischemic necrosis of the extremities due to injuries of the great vessels, with wounds infected with poisonous and radioactive substances, with significant destruction of soft tissues, long bones, with extraperitoneal injuries of the bladder and rectum
3.ongoing external bleeding or tourniquet
4.associated trauma
5.traumatic shock of the first degree
Answer: 2.

6. The injured after laparotomy are considered to be temporarily non-transportable:
1.10 days
2.5 days
3.7 days
4.12 days
5.14 days
Answer: 1.

7. The injured after craniotomy are considered to be temporarily non-transportable :
1.10 days
2.15 days
3.18 days
4.21 days

5.30 days
Answer: 4.

8. Wounded after thoracotomy are considered to be temporarily non-transportable:
1.2 days
2.5 days
3.10 days
4.14 days
5.21 days
Answer: 1.

9. The injured after the operation are considered temporarily non-transportable, but due to anaerobic infection:
1. 2-3 days
2.4-5 days
3.6-7 days
4.7-8 days
5. 2-3 hours
Answer: 4.

10. What is called primary wound debridement?
1. Surgical intervention, which has a chain of removal of non-viable tissues, creating favorable conditions for wound healing and preventing the development of wound infection
2. Surgical intervention aimed at preventing the development of wound infection, bleeding
3. Surgical intervention aimed at preventing severe complications, saving the life of the wounded and secondary bleeding
4. Surgical intervention aimed at preventing traumatic shock
5. Surgery to prevent an allergic reaction
Answer: 1.

11. What explains the excess of the size of the outlet over the inlet with a through bullet wound?
1. By changing the trajectory of the bullet in the tissues
2. The action of the head shock wave
3. The action of a lateral shock wave
4. The formation of a temporary pulsating cavity
5. A decrease in the speed of movement of a bullet in tissues with different densities
Answer: 4.

12 **. What is secondary debridement of a wound?**
1. Surgical intervention for secondary changes in the wound caused by the development of infection
2. Surgical intervention is the second in a row for the developed complications in the wound
3. Surgical intervention, which is carried out with a non-radical primary surgical treatment
4. Surgical intervention aimed at preventing traumatic shock
5. Surgical intervention aimed at preventing the development of wound infection, bleeding
Answer: 1.

13. What is the approximate value of the decrease in BCC in shock 111 cm .:
1.10% -20%
2.20% -30%
3.30% -40%

4.50% -60%
5.60% -70%

Answer: 3.

14. Specify the indications for emergency surgery before removing the victim from the state of shock.
1. Open penetrating hip fracture
2. Intra-abdominal bleeding
3. Penetrating joint injury
4. Pneumothorax
5. Traumatic shock grade 3

Answer: 2.

15. What does not apply to the periods of the clinical course of SDS.
1. Compression
2. Precompression
3. Early post-compression
4. Intermediate post-compression
5. Late post-compression

Answer: 2.

16. Specify the first aid measures for the syndrome of prolonged compression.
1. Introduction of a narcotic analgesic
2. Free bandaging of the injured limb
3. Transport immobilization of the limb
4. The imposition of a tourniquet on the limb
5. Infusion therapy
Answer: 1,2,3

Ministry of Health of the Kyrgyz Republic
Ministry of Education and Science of the Kyrgyz Republic
Kyrgyz State Medical Academy named after I.K. Akhunbaeva

Approve
Rector of KSMA named after I.K. Akhunbaeva,
MD, prof. Kudaibergenova I.O.

_____
"____" _____ 2021

Training program
on the elective course: "Istanbul Protocol" for the main professional educational residency program in the specialty: "Traumatologist, orthopedist"

Full-time form of education
Year of study -2nd year of residency
Labor intensity - 4.8 credit hours (144 hours)
Duration - 3 weeks.

No.	Type of educational work	Total hours
1	Total labor intensity	144
2	Lectures	6
3	Seminars	6
4	Practice	132
5	Control type	offset

Bishkek -2021

Annotation

Every person, regardless of gender, race, ethnicity, or religious belief, has the right to protection and respect for such fundamental rights as the right to life, liberty and security of the person, the right not to be subjected to torture and inhuman, cruel or degrading treatment in the family and in the public sphere, the right to health.

The Kyrgyz Republic, being a party to international treaties, committed to take all necessary measures to prevent violence and guarantee the availability of quality medical care in response to violence to everyone, including those belonging to vulnerable groups of the population, as well as to those in conflict with the law.

The special report of the Akyikatchy (Ombudsman) of the Kyrgyz Republic on torture noted that torture in the Kyrgyz Republic continues to be massive and widespread. This is confirmed by numerous monitoring activities carried out by the Akyikatchi (Ombudsman) and his staff, human rights NGOs, as well as the conclusions of international organizations and experts set out in the relevant reports.

In many cases, when contacting medical institutions, victims of violence, especially women, children, the elderly and persons in custody, hide the fact of violence, because they are in a dependent position of abuse. In most cases, they are afraid that their confession will provoke even more violence or torture. Most of them do not believe that someone can help them.

The special report of the Akyikatchy (Ombudsman) on Torture notes that “the medical examination of detainees and persons in custody does not meet the requirements for this procedure, is of a formal nature or is not carried out at all. Special forms are not used to record bodily injuries. As a result, it is practically impossible for victims of torture to document physical injuries and prove the fact of torture, especially in cases where acts of violence leave no visible traces. "

In the report of the UN Special Rapporteur against Torture of October 21, 2014. The UN General Assembly stated that “the Istanbul Protocol serves as a standard for medical evidence produced by experts, an indicator of the effectiveness of evidence, and for establishing justice for victims of torture,” and also noted that “qualitative forensic reports can revolutionize the investigation of torture”

The World Health Organization notes that in modern times, health systems are assigned a key role in preventing violence and injury.

Explanatory note

The goal of mastering the curriculum on the Istanbul Protocol is to train a doctor who has fundamental theoretical knowledge and practical skills in the field of examination, medical documentation of persons who become victims of torture and face ill-treatment by the authorities.

Tasks:

1. Correct medical documentation, registration of persons subjected to torture and ill-treatment by the authorities

2. Issuance to patients and other persons in accordance with the legislation of an extract from a medical card or medical history, in which bodily injuries or traces of violence are recorded in writing
3. The use by medical workers of a unified standard form of examination, medical examinations, educational and reporting documentation for all types of violence, torture, and cruel treatment.
4. Notification of the internal affairs bodies and the prosecutor's office about the facts of the treatment of the victims and the provision of medical assistance to them with their consent within 24 hours.

The place of the discipline in the structure of BPEP is an elective course, designed for 3 weeks, 144 academic hours, 4.8 credit hours; to study this academic discipline, knowledge, skills and abilities are required, formed by the previous level of education in the specialty "medicine" - qualification "doctor - textbook "or in the specialty" pediatrics "- qualification" doctor-pediatrician "for all specialties.

Residents who have mastered the discipline are trained for the following types of professional activities:
- diagnostic
- medical
- rehabilitation
- organizational and managerial

As a result of mastering the “Istanbul Protocol” discipline, the student must have the following universal competencies: descriptive, analysis, synthesis (UC-1);

The following professional competencies:

Diagnostic activity :
- readiness to describe bodily injuries or their traces in patients (PC-5)
- readiness to determine the types of torture, ill-treatment and the traumatic objects that caused them (PC-6)
- readiness to determine the limitation period for causing bodily harm (PC-7)
- readiness for medical documentation of bodily injuries by forms (form No. 00 3 / y). (PC-8)

Medical activity:
- readiness to provide medical care to patients in need of medical care (PC-9);

Rehabilitation activities
- readiness to use medical and psychological measures to rehabilitate patients in cases of torture or ill-treatment. (PC-10).

Organizational and managerial activities:
- readiness to create conditions for examining patients in cases of torture or ill-treatment (offices) (PC-11)
- readiness to respect the confidentiality of the examination of patients in cases of torture and ill-treatment (PC 11)
- readiness to participate in the provision of medical care in cases requiring the provision of medical care (PC 12)

No.	code	Content of competence	As a result of studying the academic discipline, students must:
1.	UC-1	readiness for descriptive, their analysis and synthesis	Know: an algorithm for describing damage or damage traces. Be able to: independently analyze and evaluate educational, scientific literature,

			use the Internet for professional activities Possess: the skills of presenting an independent point of view, analysis and logical thinking, the principles of medical deontology and medical ethics.
2.	PC-5	willingness to describe bodily injuries or traces of them in patients	Know: a technique for describing bodily harm. Be able to: different types of bodily harm (abrasions, bruises, etc.) Possess: a technique for describing bodily injuries (abrasions, bruises, etc.)
3.	PC-6	readiness to identify the types of torture, ill-treatment and the traumatic objects that caused them	Know: different types of torture. Be able to: different types of damage left by different methods of torture. Possess: evaluate their possible origins.
4.	PC-7	willingness to determine the limitation period for causing bodily harm	Know: the theoretical basis for determining the duration of the injury. Be able to: describe the processes of healing damage. Possess: assessment of morphological signs of the prescription of damage.
5.	PC-8	readiness for medical documentation of bodily injuries by forms (form No. 00 3 / y).	Know: the content of various forms of medical documentation. Be able to : apply appropriate forms of medical documentation of torture or ill-treatment. Possess: filling out various forms of medical documentation and evaluating the results of the description of the damage.
6.	PC-9	readiness to provide medical care to patients in need of medical care	Know: the basic principles of therapy for various conditions, including urgent ones. Be able to: correctly and timely assess the clinical situation in cases of such a situation during the examination of patients. Be proficient in: modern emergency care skills.
7.	PC-10	readiness to use medical and psychological measures to rehabilitate patients in cases of	Know: possible medical and psychological residuals of torture and ill-treatment.

		torture or ill-treatment.	Be able to : apply medical and psychological knowledge for the psychological rehabilitation of patients in cases of torture and ill-treatment. Possess: accessible methods of medical and psychological rehabilitation of patients in cases of torture and ill-treatment.
eight.	PC-11	readiness to create conditions for examining patients in cases of torture or ill-treatment	Know: about the necessary conditions for examining patients in cases of torture and ill-treatment. Be able to : conduct an examination of patients in appropriate conditions (without representatives of the authorities) Possess : the ability to maintain the confidentiality of the examination of patients in cases of torture and ill-treatment.
nine.	PC-12	readiness to participate in the provision of medical care in cases requiring the provision of medical care	Know: the main clinical signs of the condition requiring medical attention. Be able to: apply the necessary therapy in the provision of medical care. Possess: the skills of intramuscular, intravenous infusion, artificial respiration.

The results of mastering the discipline: at the end of the study of this discipline, the resident should know:

1. Basic principles of the Istanbul Protocol
2. Organization of examination of patients in cases of torture and ill-treatment
3. Registration of medical documentation in accordance with forms No. 003-3 / y, No. 003-4 / y.
4. Classification of bodily injury
5. Algorithm for describing bodily injury
6. Morphological changes in bodily injury, depending on the age of their infliction
7. The clinical picture of conditions that require medical attention.

Be able to:

1. Apply the rules of ethics, deontology when examining patients in cases of torture and ill-treatment
2. Maintain the confidentiality of the examination of patients in cases of torture and ill-treatment.
3. Describe the injuries and their marks
4. Determine the prescription of the injury
5. Determine the type of torture and possible bodily harm.

Possess:

1. Ability to collect anamnesis and interview the patient
2. Ability to describe various types of bodily harm
3. Ability to determine the age of their infliction by studying the morphological properties of damage

4. Analysis of detected injuries and their assessment
5. Completion of medical documents, including forms No. 003-3 / y, No. 003-4 / y for examination in cases of torture and ill-treatment.

The complexity of mastering the curriculum of the discipline:

Name of the discipline	Distribution of curriculum time by type of occupation		
	Total labor intensity according to GOS		
	in credit units	in hours	weeks
Istanbul Protocol (elective)	4.8 144 3		

Distribution of hours per week by type of study
(lectures, seminars)

No. weeks	Classroom part ten %			Practice 90%	Total 100%	In credits
	Topic name	Lectures (academic hours)	Seminars (academic hours)			
		6 h	6 h	132	144	4.8
1.	Declaration and Convention on Human Rights	2		44	48	1.6
	Medical documentation of traces of torture and ill-treatment		2			
2.	Various types of torture causing bodily harm	2		44	48	1.6
	Medical classification of bodily injury. Algorithm for describing bodily injury		2			
3	Morphological characteristics of bodily injury	2		44	48	1.6
	Filling out forms No. 003-3 / y, No. 003-4 / y for		2			

	medical examination in cases of torture and ill-treatment.					
	Total	6 h	6 h	132	144	4.8

Thematic plan of lectures for residents of narrow specialties on the block "Istanbul Protocol".

No.	Lecture title	watch	Pharma control
1	Declaration and Convention on Human Rights. Principles of the Istanbul Protocol	2	Elective course
2	Torture. Concept. Various types of torture causing bodily harm. The consequences of torture.	2	Elective course
3	The difference between torture and other forms of violence (cruel treatment, cruel punishment, degrading treatment, degrading punishment.	2	Elective course
	Total	6 h	offset

Thematic plan of seminars for residents of narrow
Specialties for the block "Istanbul Protocol".

No.	Name of the workshop	Watch	form of control
1	Classification of bodily injury. Morphological characteristics of bodily injury.	2	Elective course
2	Damage to the skin (abrasions, bruises, bruises, wounds, burns, scars, head trauma, chest, etc.)	2	Elective course
3	Principles for determining the duration of an injury (the healing process of abrasions, bruises, wounds, fractures, etc.)	2	Elective course
	Total	6 h	offset

Thematic plan of practical lessons
for residents of narrow specialties by block
“Istanbul Protocol”.

No. weeks	Practical name classes	watch	
1	Practical acquaintance with forms No. 003-4 / y: Features of the content, interviewing. Informed consent under an expert for examination, description of damage, collection of anamnesis, medical documents. Features of drawing up conclusions.	44 h.	Elective course
2	Work with specific medical documents (medical cards, outpatient cards, etc.) Diagnostic-descriptive part of the examination of a specific injury. Algorithm for describing damage on a specific expert sub-basis. Determination of the duration of damage.	44 h.	Elective course
3	Identification, description of traces of bodily harm. Description of scars. Determination of the duration of the infliction of damage to cicatricial changes. Identification of the need for consultations with other specialists (psychiatrists) as a consequence of torture, ill-treatment and violence. Drawing up expert conclusions. Peculiarities of conclusions in cases of torture.	44 h.	Elective course
	total	132 h.	offset

Contents of the program

Lectures:

Topic # 1. Declaration of Human Rights. Human Rights Convention. Constitution of the Kyrgyz Republic. National Center for the Prevention of Torture. Istanbul Protocol.

Topic number 2. Torture. Concept. Criminal Code of the Kyrgyz Republic. Types of torture (phalanx, hanging, electric shock, exposure to teeth, strangulation, sexual torture, etc.)

Topic number 3. The difference between torture and other types of violence (cruel treatment and cruel punishment, degrading treatment, degrading punishment). The consequences of torture.

Seminars:

Topic # 1. Medical and forensic classification of bodily injuries. The mechanism of their formation. Morphological characteristics of bodily injury.

Topic number 2. Damage to the skin. Algorithm for describing damage. Abrasions, bruises, bruises, wounds, burns - differential diagnosis. Head injuries, chest injuries, fractures.

Topic number 3. Principles for determining the duration of damage. The reaction of tissues to external factors. The healing process of abrasions, bruises, wounds, fractures, burns, depending on the age of the infliction. Scars - diagnosis, establishment of the mechanism of formation and the age of formation.

Practical lessons:

Topic # 1. Practical acquaintance with forms No. 003-4 / y: Features of the content, interviewing. Informed consent under an expert for examination, description of damage, collection of anamnesis, medical documents. Features of drawing up conclusions.
Topic number 2. Work with specific medical documents (medical cards, outpatient cards, etc.) Diagnostic-descriptive part of the examination of a specific injury. Algorithm for describing damage on a specific expert sub-basis. Determination of the duration of damage.

Topic number 3. Identification, description of traces of bodily harm. Description of scars. Determination of the duration of the infliction of damage to cicatricial changes. Identification of the need for consultations with other specialists (psychiatrists) as a consequence of torture, ill-treatment and violence. Drawing up expert conclusions. Peculiarities of conclusions in cases of torture.

Control questions

1. Constitution of the Kyrgyz Republic on human rights

2. Legal basis of the Istanbul Protocol (Declaration of Human Rights, International Conventions on Human Rights)

3. Basic principles of the Istanbul Protocol

4. Torture. Definitions.

5. The Criminal Code of the Kyrgyz Republic.

6. Medical documentation of traces of torture, inhuman, cruel treatment of a person.

7. Classification of bodily injury.

8. Types of torture and possible traces of bodily harm.

9. Algorithm for the description of bodily harm.

10. Abrasions, bruises, wounds, fractures, etc.

11. Scars. Determination of the mechanism of formation and the duration of scar formation.

12. Forms No. 003-3 / y, No. 003-04 / y for filling out the results of the examination of victims and other persons subjected to torture or cruel treatment.

Main literature

1. Effectively documenting violence, torture and other cruel, inhuman or degrading treatment or punishment. A practical guide for medical professionals at all levels of health care and other departments of the Kyrgyz Republic. Bishkek, 2014.216 p.

Additional literature

1. Pugovkin Yu.I., Popov V.L. Forensic Medicine. Moscow. "Medicine" 2003. -496s.
2. Criminal Code of the Kyrgyz Republic, Bishkek, 2015.

Istanbul Protocol

Follow-up tests

1. What is the main law of the Kyrgyz Republic?

1. Law on health protection of citizens of the Kyrgyz Republic
2. Criminal Procedure Code of the Kyrgyz Republic
3. Code of the Kyrgyz Republic on violations
4. Code of the Kyrgyz Republic on misconduct
5. Constitution of the Kyrgyz Republic

2. Which organization adopted the Universal Declaration of Human Rights
1.The Constitution of the Kyrgyz Republic
2. The Criminal Code of the Kyrgyz Republic
3. The Criminal Procedure Code of the Kyrgyz Republic
4. Law on health protection of citizens of the Kyrgyz Republic
5. UN Central Assembly

3. Which organization adopted the International Act on Civil and Political Rights
1.The Constitution of the Kyrgyz Republic
2. The Criminal Code of the Kyrgyz Republic
3. The Criminal Procedure Code of the Kyrgyz Republic
4. The Law on Forensic Science of the Kyrgyz Republic
5. UN General Assembly

4. Which organization adopted the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment
1. The Criminal Code of the Kyrgyz Republic
2. The Constitution of the Kyrgyz Republic
3. The Criminal Procedure Code of the Kyrgyz Republic
4. The Law on Medicines
5. UN General Assembly

5. Which organization has adopted a set of principles for the protection of all persons subject to any form of detention or imprisonment?
1. The Constitution of the Kyrgyz Republic
2. The Criminal Procedure Code of the Kyrgyz Republic
3. The Criminal Code of the Kyrgyz Republic
4. Law on licenses in the Kyrgyz Republic
5. UN General Assembly

6. Which institution has adopted the Standard Minimum Rules for the Treatment of Prisoners?
1. The Constitution of the Kyrgyz Republic
2. The Criminal Procedure Code of the Kyrgyz Republic
3. The Criminal Code of the Kyrgyz Republic
4. Law on licenses in the Kyrgyz Republic
5. By the UN Congress in 1955

7. Istanbul Protocol submitted to the UN High Commissioner for Human Rights
1.In 1920
2.In 1930
3. In 1969
4.In 1979
5.In 1999

8. What is meant by torture
1. Causing bodily harm by officials

2. Causing bodily harm by street trauma
3. Causing bodily harm at home through a drunken quarrel
4. Non-government bodily injury
5. Causing bodily harm in traffic accidents

9. What is meant by bruising
1. Bone fracture
2. Hemorrhage under the soft integument of the body
3. Dislocations in the joints
4. Crushing of organs
5. Hemorrhage is not damage

10. What is meant by an abrasion
1. Hemorrhage into soft tissues
2. Sedimentation of the epidermis
3. Wounds reaching the papillary layer of the epidermis
4. Damage penetrating to the depth of the reticular layer of the dermis
5. Damage to the fascia muscles

11. The types of torture include everything except
1.phalanx
2.suffocation
3.positional position
4.nudity
5.the imposition of handcuffs upon arrest of the defendant

12. The consequences of the "phalanx" will be everything except
1. Bruising
2. Abrasions
3. Tenosynovitis
4. Strangulation sulcus
5. Dysfunction of the foot

13. When using a stun gun, there may be all traces, except:
1. Areas of punctate wounds on the skin
2. Areas of burn wounds on the skin
3. Location of wounds nearby
4. Location of wounds of the same shape
5. Presence of bone fractures

14. Wet strangulation is understood as
1. Strangulation by hands
2. Putting the bag on your head
3. Submersion of the head under water
4. Closure of the upper airways
5. Covering the mouth and nose with tape

15. When examining victims in medical institutions, the form is filled in
1. No. 003-03 / y
2. No. 003-04 / y
3. No. 505-05 / g
4. No. 505-05 / d

5. No. 505-05 / e

16. When examining victims in forensic medical expert institutions, a form is filled in
1. No. 003-04 / y
2. No. 003-03 / y
3. No. 005-05 / k
4. No. 005-05 / d
5. No. 005-05 / y

4.5 Practice curriculum

MINISTRY OF EDUCATION AND SCIENCE OF THE KYRGYZ REPUBLIC
MINISTRY OF HEALTH OF THE KYRGYZ REPUBLIC
KYRGYZ STATE MEDICAL ACADEMY
them. I.K. AKHUNBAYEVA

I approve
Rector of KSMA named
after I.K. Akhunbaeva
prof. Kudaibergenova
I.O. _____
"_____" _____ 2021

WORKING PROGRAM OF PRACTICE

in specialty

"Traumatologist-orthopedist"

Speciality	Traumatologist-orthopedist
Year of study	1-3
Semester	I-VI
Total labor intensity	230,4
Total hours	6624
Practice	5961
Types of control	Exam

Bishkek - 2021

Explanatory note

Practical training of residents in the specialty "Traumatologist, orthopedist" is carried out on the basis of the Individual training plan for the resident. Residents can be admitted to practice with the condition of observing the sequence of mastering the educational program in accordance with the BPEP and the Curriculum - who have successfully mastered the disciplines of the educational program and completed the training simulation course in the specialty “Traumatologist-orthopedist”.

Clinical base: Postgraduate training of residents is carried out in clinical bases accredited by the authorized state body in the field of health as clinical bases. The profile of the medical organization, the basis for passing practical training should correspond to the direction of the practical training of the resident. Medical organizations in which residents do their internships must have a license for medical activities, providing for the performance of work (provision of services) corresponding to the area of practical training of residents. Practical training on a clinical base and on a practical training base is carried out on the basis of an agreement with the relevant organizations or institutions. For residency in the specialty "Traumatologist, orthopedist" clinical bases are the departments of traumatology, orthopedics, general therapy, functional diagnostics, anesthesiology and resuscitation, surgery, the consultative and diagnostic department of the Bishkek Scientific Research Center of Traumatology and Orthopedics, the Republican Clinical Infectious Diseases Hospital, the National Center for Phthisiology, the National Center of Oncology and Hematology, National Surgical Center, National Hospital of the Ministry of Health of the Kyrgyz Republic, Bishkek City Clinical Hospital No.1, FMC in Bishkek and regions. Department of Forensic Medicine, KSMA.

The purpose of the practice: consolidation of theoretical knowledge, development of practical skills and abilities acquired in the process of training a doctor-resident, and the formation of professional competencies of a specialist-traumatologist, orthopedist, i.e. gaining experience in solving real professional problems. In the content of the main educational program of postgraduate professional education (residency), practice makes up 90% of the study time.

Practice objectives:

- To obtain information about injuries and orthopedic diseases, apply objective methods of patient examination, identify general and specific signs of the disease;
- To assess the severity of the patient's condition, take the necessary measures to remove the patient from such a state, determine the volume and sequence of resuscitation measures, provide the necessary urgent assistance;
- To determine the indications for hospitalization and organize it;
- To carry out differential diagnostics for injuries and diseases of the musculoskeletal and musculoskeletal system, substantiate the clinical diagnosis, plan and tactics of patient management;
- To determine indications for special research methods;
- To evaluate the data of laboratory and instrumental research methods and give a conclusion on them;
- To prescribe the necessary medicines and other therapeutic measures;
- To evaluate the effectiveness of drug therapy, substantiate indications for surgical treatment;
- To choose rational methods of secondary prevention to improve the prognosis of the course of injuries and orthopedic diseases;
- To get familiarized with the issues of the patient's ability to work - temporary or permanent disability;

- To conduct clinical examination of healthy and patients with acute trauma and orthopedic pathology, to be able to analyze the results;
- To draw up medical documentation provided for by the legislation of the Kyrgyz Republic on healthcare;
- To be guided by the ethical and deontological principles of medical practice in communicating with colleagues and patients;
- To learn how to manage the work of nursing and junior medical personnel;
- To abstract the most important sections of monographs and reviews;
- To study the recommended literature, including in related and fundamental disciplines independently;

- To participate in clinical-thematic analyzes, meetings of the scientific society, clinical, scientific-practical and pathological conferences; make presentations at them. using clinical and archival material;
- To be able to independently diagnose and provide emergency (emergency) care at the pre-hospital and hospital stages, as well as determine the tactics of providing further medical care in case of emergency.

Place of practice in the structure of BPEP: Prerequisites qualification "medical doctor", "therapist" "general practitioner".

Postrequisites qualification "traumatologist, orthopedist"

Labor intensity of mastering the training program of practice: 230.4 credit hour

The results of mastering the practice:

a list of practical skills with an indication of the level of assimilation

The list of planned learning outcomes in the discipline correlated with the planned results of mastering the educational program

The study of this academic discipline is aimed at the formation of the following general cultural (GCC), universal (UC) and professional (PC) competencies in students:

No.	**Code**	**Content of competence**	**As a result of studying the academic discipline, students must:**		
			Know	**Be able to**	**Possess**
1	GPC-1	The ability and willingness to analyze socially significant problems and processes, use in practice the methods of humanitarian, natural scientific, biomedical and clinical sciences in various types of professional activities of a specialist	Socially significant problems and processes of humanitarian, natural scientific, biomedical and clinical sciences in various types of professional activities of a specialist	Analyze the problems and processes of humanitarian, natural scientific, biomedical and clinical sciences and used in practice in various types of professional activities of a specialist	Methods for analyzing socially significant problems and processes in the humanities, natural sciences, biomedical and clinical sciences in various types of professional activities of a specialist

2	GPC-2	Ability and readiness for logical and reasoned analysis, public speech, discussion and polemics, editing texts of professional content, the implementation of educational and pedagogical activities, cooperation and conflict resolution, towards tolerance;	The basics of logical and reasoned analysis, conducting a public speech, discussion and polemics, the basics of editing texts of professional content, the basics of educational and pedagogical activities, the basics of cooperation and conflict resolution and tolerance;	Logically argue and analyze, public speech, conduct discussions and polemics, edit texts of professional content, carry out educational and pedagogical activities, cooperate and resolve conflicts, be tolerant;	Methods of logical and reasoned analysis, methods of public speech, skills of discussion and polemics, editing texts of professional content, skills in the implementation of educational and pedagogical activities, cooperation and conflict resolution, tolerance
3	GPC-3	The ability and willingness to use management methods, organize the work of performers, find and make responsible management decisions in conditions of different opinions and within the framework of their professional competence - a specialist	Fundamentals of management methods and organization of the work of performers, the basis for making responsible management decisions in conditions of different opinions and within the framework of their professional competence - a specialist	Use management methods, organize the work of performers, find and make responsible management decisions in conditions of different opinions and within the framework of their professional competence - a specialist	Skills to use management methods, skills of organizing the work of performers, finding and making responsible managerial decisions in conditions of different opinions and within the framework of their professional competence - a specialist
4	GPC-4	The ability and willingness to carry out their activities, taking into account the moral and legal norms adopted in society, to comply with the rules of medical ethics, laws and regulations on	The foundations of moral and legal norms adopted in society, compliance with the rules of medical ethics, laws and regulations on working with confidential information, the basics of maintaining medical	Carry out their activities taking into account the moral and legal norms accepted in society, observe the rules of medical ethics, laws and regulations on working with confidential	Methods and skills of implementation in their activities, taking into account the moral and legal norms adopted in society, compliance with the rules of medical ethics, laws and regulations on

		working with confidential information, to maintain medical secrecy.	secrecy	information, keep medical secrets	working with confidential information, preservation of medical secrecy
5	UC-1	Readiness for abstract thinking, analysis, synthesis	Fundamentals of abstract thinking, analysis, synthesis	Abstractly think, analyze, synthesize	Abstract thinking, analysis, synthesis
6	UC-2	Willingness to manage a team, tolerantly perceive social, ethnic, confessional and cultural differences	Fundamentals of team management, tolerant perception of social, ethnic, confessional and cultural differences	Lead a team, tolerate social, ethnic, confessional and cultural differences	Methods and skills of team management, tolerant perception of social, ethnic, confessional and cultural differences
		Preventive activities			
1	PC-1	Readiness for implementation complex events, aimed at preservation and strengthening health and including in myself shaping healthy way life, warning and (or) spreading diseases, their early diagnostics, identifying the reasons and their conditions occurrence and development as well aimed at elimination harmful influence on health human factors his environment a habitat	Fundamentals of primary prevention and sanitary educational work	To make a plan preventive activities	Work skills with groups at risk
2	PC-2	Readiness for holding	The main questions	Identify specific anamnestic	The ability to compare the signs

		preventive health inspections, clinical examination and implementation dispensary observation of healthy and chronic patients with injuries and orthopedic pathology	surgery, laboratory and instrumental diagnostics traumatological and orthopedic diseases, treatment methods surgical pathology, incl. diagnostics and treatment urgent conditions in medicine	features, to define character and severity individual symptoms, make out accounting and reporting documentation	identified during an objective examination with the data of a clinical and laboratory examination, the results of an ultrasound, x-ray, radionuclide examination
3	PC-3	Readiness for holding anti-epidemic measures, organization protection of the population especially in the outbreaks dangerous infections when worsening radiation setting, spontaneous disasters and other emergency situations	The basics epidemiology; peculiarities epidemic process; basics organization radiobiological protection, population; basics organization medical emergency services	Organize anti-epidemic measures, regime-restrictive activity,	The concept of the quality and effectiveness of preventive measures, the registration system for traumatological and orthopedic patients
4	PC-4	Readiness for application socially hygienic collection methods and medico-statistical analysis information about indicators health of adults and adolescents	The basics medical statistics, accounting and analysis major indicators health population, fundamentals medical insurance and activities medical institutions in conditions insurance medicine	Collect and medico-statistical analysis of information on population health indicators different age sex groups, nature of studying their state of health	Methods of social and hygienic monitoring, methods of statistical evaluation of data

		Diagnostic activity			
1	PC-5	Readiness for definition by patients pathological states, symptoms, syndromes diseases, nosological forms in According to The international Classification of surgical diseases and problems, health-related	Semiotics Surgical diseases, diagnostic criteria, basics interpretations data laboratory instrumental examination with taking into account modern perceptions of pathology in traumatology, orthopedics, basics international classification diseases, clinical recommendations leading communities of doctors of different specialties	Interpret Laboratory and instrumental research data, calculate accepted in traumatology, orthopedics indices, Child-Pugh, etc.)	Skills to examine the patient with various trauma and orthopedic pathology
		Medical activity:			
1	PC-6	Readiness for maintenance and treatment patients, needing rendering in case of emergency traumatological conditions before hospital care	Etiology, pathogenesis and clinic of major injuries and orthopedic diseases, methods diagnostics pathology of internal organs, including laboratory (hormonal, biochemical research, clinico-laboratory methods, ELISA, high performance liquid chromatography), instrumental (ultrasound, ECG),	Define testimony and expediency conducting ultrasound, radioisotope, visualizing research (CT, MRT), choose an adequate algorithm for the examination and treatment of traumatological and orthopedic patients	Skills in diagnosing and treating traumatological and orthopedic diseases, methods of monitoring therapy

			X-ray (incl. radioisotope, CT, MRT), peculiarities organizations and content qualified assistance patients with trauma and orthopedic pathology		
2	PC-7	Readiness for providing urgent medical care for patients with surgical pathology emergency situations, participation in medical evacuation	Etiology, pathogenesis, clinical picture urgent states in surgery, methods diagnostics and treatment	Conduct differential diagnosis of urgent states, render urgent help, incl. v emergency situations	Skills in diagnosing and treating emergencies
		Rehabilitation activities			
1	PC-8	Readiness for application natural medical factors non-drug therapy, herbal medicine and other methods in patients, needing medical rehabilitation and sanatorium resort treatment	The basics rehabilitation and balneology, the foundations of a common pathology human, immunobiology and reactivity organism	Select treatment and rehabilitation institution, equipped with necessary complex rehabilitation events, appropriate disease; choose additional methods non-drug therapy	Knowledge of non-drug therapy, methods of rehabilitation for traumatological and orthopedic diseases, techniques and their use in clinical practice
		Psychological and pedagogical activity			
1	PC-9	Readiness for formation of population, patients and their family members motivation, aimed at preservation and strengthening your health and health	Fundamentals of primary and secondary prevention diseases and sanitary educational work	Conduct systematic education, including familiarization with theoretical the basics of various pathologies of internal organs, teaching methods	Fundamentals of pedagogy, communication skills when communicating with patients and their families

		surrounding		prevention of complications, promotion of the correct lifestyle	
		Organizational and managerial activities			
1	PC-10	Readiness for application major principles organizations and management in sphere health care, medical organizations and their structural divisions	The basics Health care legislation and policy the documents, defining activity bodies and institutions health care	Organize in medical organizations and their structural divisions favorable conditions for stay patients and labor activities medical staff	Experience in managerial work, experience in distributing the duties of staff in time and place, monitoring the fulfillment of these duties
2	PC-11	Readiness for participation in the evaluation quality of delivery medical help with using major medical statistical indicators	Modern perceptions of quality and defect rendering medical help, legislative acts of the Kyrgyz Republic in standard peer review	Define right of choice medical technologies, degree achievements planned the result	Knowledge of non-drug therapy, rehabilitation methods for traumatological and orthopedic diseases, techniques and their use in the clinical practice of a traumatologist, orthopedist
3	PC-12	Readiness for Providing medical help with emergency situations, incl. participation in medical evacuation	The basics organizations and tactics specialized units medical service in emergency situations, hostilities	Organize effective medical sorting of sick and wounded	Providing planned and emergency care

The list of work of a resident in the specialty "Traumatologist-orthopedist" during the practice in a hospital

Supervision of at least 10-12 patients daily under the supervision of a physician
Filling out medical documentation for an inpatient under the supervision of a doctor
1 duty per month together with the main duty officer
Mastering the methods of examining patients with various endocrine pathologies
Participation in the analysis of patients at clinical conferences
Participation in the rounds of professors, associate professors, assistants
Study of methods of providing care in case of emergency conditions in the clinic of internal diseases

Study of special and periodical literature on traumatology and orthopedic diseases

The list of work of a resident in the specialty "Traumatologist-orthopedist" in practice in a polyclinic

Work in the office of a traumatologist, orthopedist in a polyclinic
Departure for a consultation on the line of the sanitary aviation with the main duty officer
Mastering the methods of examination of patients with traumatological and orthopedic profile
Participation in the debriefing of patients at conferences
Study of methods of first aid in case of emergency in the practice of a traumatologist, orthopedist
Study of special and periodical literature on traumatology and orthopedic diseases

Special professional skills and abilities formed as a result of the internship in the specialty

"Traumatologist-orthopedist"

First year of study

# #	**Resident professional activities**	**Place of work**	**Cycle times**	**Formed professional competencies**	**EVALUATION FUNDS**
	Hospital (Basic part)		***First year of study***		
1	Supervision of trauma patients, medical records	Traumatology departments of BNITSTO	Teaching hours-1056 (22 weeks)	Diagnostics osing drug and trauma patients , UK-1,2)	OI, PN, filling out diaries, offset
2	Mastering the methods of instrumental research in the diagnosis of traumatological, orthopedic pathology	Ultrasound, X-ray, Med. Center KSMA, BNITSTO	Teaching hours -96 (2 weeks)	Diagnostics of injuries and orthopedic pathologies (PC 2,5,6).	OI, PN, interpretation of analysis data and ultrasound results, radiographs
	Participation in clinical-thematic analyzes of patients, meetings of the scientific society, clinical, scientific-practical and pathological	Clinical conferences BNITSTO analysis of clinical cases, etc. in the		Diagnostics, medication selection algorithm therapy of traumatological and orthopedic	OI, residents' diaries

	conferences.	department		pathology (PC-1, 2, 4, 5, 6, 9, 11, UK - 1,2)	
	Polyclinic				n
1	Outpatient management of patients with trauma and orthopedic pathology, filling out outpatient cards, determining indications for hospitalization	Office of a traumatologist, orthopedist, FMC	8 weeks (384 hours)	Diagnosis of injuries and orthopedic pathology, the choice of medication and non-drug therapy, management of patients on an outpatient basis (PC-1, 2, 4, 5, 6, 9, 11, UK - 1,2)	OI, PN, residents' diaries, test
	General clinical disciplines (related and fundamental)				
1	Operative surgery and topographic anatomy	Department of Surgery, National Chemical Center of the Ministry of Health of the Kyrgyz Republic	4 weeks (192 hours)	PC 1, PC5, PC 7	US, PT, SZ
2	Radiation diagnostics		4 weeks (192 hours)	PC-1, PC-2, PC-5, PC-6, PC-8	Problem solving, analysis of clinical cases.
3	Osteoarticular phthisiology	Department of Phthisiology, NCP	2 weeks (96 hours)	PC 1, PC5, PC 7	Problem solving, analysis of clinical cases.
4	Rheumatology	Department of Rheumatology	2 weeks (96 hours)	PC 1, PC5, PC 7	Problem solving, analysis of clinical cases.
5	Bone oncology	Surgical Departments of NCO	2 weeks (96 hours)	PC 1, PC5, PC 7	Problem solving, analysis of clinical cases.

Second year of study

##	**Resident professional activities**	**Place of work**	**Cycle times**	**Formed professional competencies**	**EVALUATION FUNDS**
	Hospital (Basic part)		***Second year of study***		
1	Supervision of trauma patients, medical records	Traumatology departments of BNITSTO	Teaching hours-1056 (22 weeks)	Diagnostics, an algorithm for choosing drug and non-drug therapy for trauma patients (PC-1, 2, 4, 5, 6, 9, 11, UK-1,2)	OI, PS, filling out diaries, offset
2	Mastering the methods of instrumental research in the diagnosis of traumatological, orthopedic pathology	Ultrasound, X-ray, Med. Center KSMA, BNITSTO	Teaching hours -96 (2 weeks)	Diagnostics of injuries and orthopedic pathologies (PC 2,5,6).	OI, PS, interpretation of analysis data and ultrasound results, radiographs
	Participation in clinical-thematic analyzes of patients, meetings of the scientific society, clinical, scientific-practical and pathological conferences.	Clinical conferences BNITSTO analysis of clinical cases, etc. in the department		Diagnostics, medication selection algorithm therapy of traumatological and orthopedic pathology (PC-1, 2, 4, 5, 6, 9, 11, UK - 1,2)	OI, residents' diaries
	Polyclinic				n
1	Outpatient management of patients with trauma and orthopedic pathology, filling out outpatient cards, determining indications for hospitalization	Office of a traumatologist, orthopedist, FMC	14 weeks (672 hours)	Diagnosis of injuries and orthopedic pathology, the choice of medication and non-drug therapy, management of patients on an outpatient basis	OI, PS, residents' diaries, test

				(PC-1, 2, 4, 5, 6, 9, 11, UK - 1,2)	
	General clinical disciplines (related and fundamental)				
1	Bone-purulent surgery	Department of bone-purulent traumatology BSRCT&O	4 weeks (192 hours)	PC 1, PC5, PC 7	Problem solving, analysis of clinical cases.
2	Combustiology	Department of Combustiology BSRCT&O	4 weeks (192 hours)	... PC 6, PC7, PC8	Problem solving, analysis of clinical cases.

Third year of study

	Hospital (basic part)				
	Adult Orthopedics	Department of Adult Orthopedics BNITSTO	10 weeks	Diagnostics of pathology, management of patients in stationary conditions (PC-1, PC-2,	OI, PS, filling out diaries, offset

				PC-5, PC-6, PC-8, UK 1,2)	
	Pediatric Orthopedics	Department of Pediatric Orthopedics BNITSTO	9 weeks	PC-1, PC-2, PC-5, PC-6, PC-8	OI, PS, filling out diaries, offset
	Joint pathology	Department of Joint Pathology BNITSTO	9 weeks	PC-1, PC-2, PC-5, PC-6, PC-8	OI, PS, filling out diaries, offset
	Spine pathology	Department of spinal pathology BNITSTO	9 weeks	PC-1, PC-2, PC-5, PC-6, PC-8	OI, PS, filling out diaries, offset
	Laboratory and instrumental diagnostic methods in traumatology, orthopedics	Clinical laboratory, department of functional diagnostics, BNITSTO		PC-1, PC-2, PC-5, PC-6, PC-8	OI, PT, SZ
	Rehabilitation of patients with orthopedic pathology. Spa treatment.	Department of Kiniks		PC-1, PC-2, PC-5, PC-6, PC-8	OI, PT, SZ
	OPTIONAL PART Related and fundamental disciplines				
	Istanbul Protocol	Department of Forensic Medicine, KSMA	3 weeks	PC-11	OI, A, TC, SZ
	Emergency medicine	Department of Traumatology and Orthopedics, KSMA	3 weeks	PC-3, PC-7, PC-12	OI.TC
	pedagogy and psychology		3 weeks	PC-3, PC-7, PC-12	OI
	Public health		3 weeks	PC-3, PC-7, PC-12	OI

Legend: OI - oral interview; PS - practical skills, TC-test control, A-abstract, SZ-situational tasks.

Medical manipulations and practical skills (according to the Competence Catalog in the specialty "Traumatologist, orthopedist" **)**

No.	Name of skill	qty
1.	Examine patients with injuries and diseases of the musculoskeletal system	120
2.	Determine the presence of a fracture or dislocation based on clinical signs	50
3.	Diagnose typical congenital (congenital dislocation of the hip, clubfoot, torticollis, syndactyly) and acquired (scoliosis, deforming arthrosis, osteochondrosis, deformity of the feet) orthopedic diseases	50
4.	Anesthetize the fracture site of the diaphysis of long tubular bones	50
5.	For open fractures, temporarily stop bleeding (including the imposition of a hemostatic tourniquet, clamp, ligature, pressure bandage)	60
6.	Carry out transport immobilization in case of damage to the musculoskeletal system	60
7.	Apply a typical plaster cast splint over the distal upper and lower extremities	40
8.	Assess the condition of the limb in a plaster cast	30
9.	Remove the plaster cast in case of a threatened limb	60
10.	Give the correct position to a patient with injuries of the pelvis, spine, chest, large joints in bed	60
11.	Place the limb on a therapeutic splint when treating fractures using skeletal traction	30
12.	Remove skeletal traction	30
13.	Examine a patient with isolated injury and polytrauma. Outline a plan and sequence of treatment measures depending on the identified injuries	70
14.	Determine the prognosis, stages and terms of treatment in each individual case of common orthopedic diseases and injuries of the musculoskeletal system	70
15.	Perform conduction anesthesia for rib fractures	40
16.	Make a blockade according to the Shkolnikov method for pelvic fractures	60
17.	Perform anesthesia and reposition for fractures of the clavicle, long bones	50
18.	Perform a diagnostic and treatment puncture of the knee and shoulder joints	50

19.	Reduction of dislocations (fresh, uncomplicated) of the upper and lower extremities	60
20.	Perform primary surgical treatment of soft tissue wounds without damaging blood vessels and nerves	10
21.	Apply plaster casts - langet-circular, "fenestrated" on the upper and lower extremities	20
22.	Apply skeletal traction for the calcaneus . tuberosity and lower metaphysis of the tibia, olecranon	10
23.	Assess the position of bone fragments and be able to correct them during treatment with skeletal traction and in a plaster cast	10
24.	Provide emergency medical care for the syndrome of prolonged compression	40
25.	Based on clinical data and radiographs, determine the presence of union of fractures	20
26.	Reveal long-term non-union of fractures and the presence of a "pseudarthrosis"	1
27.	Intramedular osteosynthesis of the shoulder, forearm and hip bones	25
28.	Osteosynthesis with the Ilizarov apparatus for closed and open fractures of long bones	15
29.	Osteotomy of the long bones of the skeleton	30
30.	Osteosynthesis of the clavicle, popliteal, ankle, shoulder epicondyle	10
31.	Arthrotomy, Meniscoetomy, Synovectomy	8
32.	Muscle stitching, myolysis and tenolysis. myotomy and tenotomy, fasciotomy	8
33.	Tendon plastics	25
34.	Skin plastic. For closing the wound surface with fresh wounds, granulating wound surfaces after skin burns.	50

Training simulation course for postgraduate education residents in the specialty "Traumatologist, orthopedist"

Learning objective: to gain practical skills in basic manipulations in surgery and emergency conditions

No.	Name of disciplines (modules) and topics	Simulator type and type	Formable professional skills and abilities	The form of control
Special Occupational Skills and Skills (Clinical Skills Center)				
1.	Cardiopulmonary resuscitation	Training dummy		**Offset**
1.1	Diagnosis of circulatory arrest Goals and stages of cardiopulmonary resuscitation	Training dummy	Diagnose the type of stop hearts	**Offset**
1.2	Intubation of the trachea. Introduction of a laryngeal mask. Conicotomy.	Training dummy	Conduct a toilet of the oropharynx and restore the patency of the upper respiratory tract. "Mouth-tube" "Mask bag" Use different types of air ducts	**Offset**
1.3	Methods for restoring blood circulation, indications for direct and indirect heart massage. Indications for use electric defibrillation	Training dummy	Perform direct and indirect cardiac massage	**Offset**

1.4	Methods for monitoring the effectiveness of cardiopulmonary resuscitation. Indications for termination of resuscitation measures Signs of clinical and biological death	Training dummy	Evaluate the presence of cardiac output by the pulse on the central arteries and $EtCO_2$; to evaluate the restoration of the heart rhythm by ECG;	**Offset**
1.5	Electric outdoor defibrillation	Training dummy	Performing electrical defibrillation. Work with the device defibrillator	**Offset**

Forms of control and reporting on the practice of an intern in the specialty "Traumatologist, orthopedist"

A credit with an assessment in the practice of a resident is set on the basis of his practice report with the conclusion of the head of the department responsible for the training of the resident and the head of practical training from the corresponding base of clinical training. Acceptance of practical skills in the form of an objective structured clinical credit with assessment.

Reporting documents on practical training for residents:

- a report on the practice of residents of the established sample (in accordance with the individual plan and specialty of training), with the conclusion of the head of the department responsible for training the resident, as well as the head of practical training from the relevant base of clinical training.

- After completing the internship, the intern provides the head of the internship with the completed **“Diary of the intern of the“ Traumatologist, orthopedist ”** . The supervisor checks the diary, conducts an interview with the resident and, based on the results of the interview, and gives a score on a two-point scale «passed or not passed". Students who have not undergone practical training for a good reason, practice according to an individual plan on the basis of the order of the head of the department. Residents who have not completed internship in the absence of a valid excuse or received a “Failed” grade in the interim certification of the results of internship are considered to have academic debt.

- Filling in the diaries with estimated levels of practical skills - medical manipulations and practical skills, indicating the number of assisted and the number of independently performed manipulations.

At the end of the practice, during the meeting of the departments the residents' reports on the practice are listened and measures are developed to improve the practice, and measures on their implementation are taken.

Successful completion of practical training by an intern is a prerequisite for admitting an intern to the state final certification.

4.6. Duration of training and clinical bases for passing clinical residency in the specialty "traumatologist, orthopedist"

No.	Section name	Clinical bases	Watch	Terms of training
	General clinical disciplines		**1056**	**22**
1	Operative surgery	Department of Surgery, National Chemical Center of the Ministry of Health of the Kyrgyz Republic	192	4
2	Radiation diagnostics	Department of Radiation Diagnostics and Therapy, KSMA	192	4
3	Osteoarticular phthisiology	Department of Phthisiology, NCP	96	2
4	Rheumatology	Department of Rheumatology	96	2
5	Bone oncology	Surgical Departments of NCO	96	2
6	Bone-purulent surgery	Traumatology 5 BSRCT&O	192	4
7	Combustiology	Burn department BSRCT&O	192	4
nine	**(Special discipline)**	BSRCT&O, National Hospital of the Ministry of Health of the Kyrgyz Republic	**5036**	**107**
ten	Optional disciplines (humanitarian and educational block)	Departments of Forensic Medicine, Traumatology and Orthopedics, Pedagogy and Psychology, Public Health KSMA	**432**	**nine**
eleven	Annual final appraisals Holidays		**48**	**12**
	Total:		**6572**	**150 weeks**

4.7 Literature

1. Dmitriev , V.A. The value of educational work in the preparation of a future doctor. Higher education in Russia. Moscow 2011.
2. Tomashchik T.E. A course of lectures on deontology. 2008 r.

3. Akzhigitov G.I. et al. Osteomyelitis. - M .: Medicine, 1986.
4. Ariev T.A. Thermal lesions. - L .: Medicine, 1966.
5. Baindurashvili A.G., Voloshin S.Yu., Krasnov A.I. Congenital dislocation of the hip in infants: clinical diagnosis, conservative treatment. - SPb. SpetsLit, 2012 .-- 95 p.
6. Burgener F.A., Cormano M., Pudas T. Radiation diagnosis of diseases of bones and joints: a guide-atlas. Per. in eng. V.V. Pozharsky; ed. C.K. Ternovy, A.I. Shekhter. - M .: GEOTAR-Media, 2011 .-- 552 p.
7. Boychev et al. Operative orthopedics and traumatology. Sofia, 1961.
8. Welsher Leonid Zinovievich. Clinical oncology. Selected lectures: textbook / LZ Welsher, BI Polyakov, S.B. Peterson. - M: "GEOTAR - Media", 2009. - 486s .: ill. Bibliography 485-486.
9. Vikhrev B.S. et al. Local cold lesions. - L .: Medicine, 1991.
10. Volkov M.V. et al. Errors and complications in the treatment of fractures. - M .: Medicine, 1970.
11. Volkov M.V., Dedova V.D. Children's orthopedics. - M .: Medicine, 1979.
12. Harmful R.R. A practical guide to orthopedics. L.; M., 1930.
13. Gusev E.I., Konovalov A.N., Skvortsova V.I. Neurology and neurosurgery. M., 2010, T. 1, T 2.
14. Diagnostics and treatment of injuries / Ed. SOUTH. Shaposhnikov. - M .: Medicine, 1984.
15. Dzhumabekov S.A., Sulaimanov Zh.D., et al. "Surgical treatment of posttraumatic spinal stenosis" Bishkek, 2011
16. Dzhumabekov S.A., Anarkulov B.S., "Classification of fractures of the long bones of the skeleton" Bishkek, 2012
17. Dzhumabekov S.A., Mirjalilov V.M., et al. "Immobilization of bones and joints" Bishkek, 2013
18. Doherty M., Doherty D. Clinical diagnosis of joint diseases. Minsk: Tivali, 1993.
19. Zeman M. Technique of applying bandages St. Petersburg. Peter, 1994.
20. Irger I.M. Neurosurgery. - M .: Medicine, 1961.
21. Kazmin A.I. et al. Scoliosis. Pathogenesis and treatment. Moscow: Medicine, 1981.
22. Kligunenko E.N., "Intensive therapy of burn disease" Moscow, 2009
23. Kovanov V.V., Travin A.A. Surgical anatomy of the limbs. M .: Medicine, 1983.
24. Kozhokmatov S.K., Kudaykulov M.K. G.S. Kozhakmatova Exogenous osteomyelitis. Tutorial. Bishkek. 1997.
25. S.K. Kozhokmatov Treatment of injuries of the hip joint and their consequences. Bishkek. 1997.
26. Kollontai Yu.E. et al. Open injuries to the hand. Kiev: Health, 1983.
27. Kornilov N.V., Gryaznukhin E.G. Medical assistance in case of accidents and natural disasters. SPb, 1992.
28. Kornilov N.V., "Traumatology and Orthopedics" St. Petersburg, 2001
29. Kornilov N.V., Gryaznukhin E.G. Traumatological and orthopedic care in the clinic. SPb. Hippocrates, 1994.
30. Kotelnikov G.P., Chernov A.P., "Surgical correction of knee joint deformities" Samara, 1999
31. Kosinskaya I.S. Degenerative-dystrophic lesions of the osteoarticular apparatus. Moscow: Medicine, 1961.
32. V.V. Klyuchevsky Skeletal traction - L .: Medicine. 1991.
33. Krasnov A.F. Miroshnichenko V.F. E.L. Kotelnikov Traumatology. - M .: Medicine. 1995.
34. Krasnov A.F. Outpatient traumatology: Textbook. allowance. - Kuibyshev, 1983.

35. Kuzin M.I., Kostyuchenko B.M. Wounds and wound infection. - M .: Medicine, 1981.
36. Malova M.I. Clinical and functional research methods in traumatology and orthopedics. - M .: Medicine, 1984.
37. Mironov S.P., Kotelnikov G.P., "Traumatology, national leadership" Moscow, 2008

Additional literature

1. Gastroenterology. National leadership. Edited by Acad. RAMS V.T. Ivashkina. - M .: GEOTAR-Media, 2008.
2. G.V. Shavkuta Peptic ulcer: questions of etiology, clinic, diagnosis, treatment. Tutorial. Ed. Growth of GMU, 2008
3. Mikhailov L.K. Emergency traumatology M .: Dialect LLC, 2012
4. Nikitin G.D. Gryaznukhin E.G. Multiple fractures and associated injuries. - L .: Medicine. 1983.
5. Orthopedics. National leadership. Ed. S.P. Mironova, G.P. Kotelnikov. 2010.
6. Operative surgery / Under total. ed. Dittmann. - Budapest: Hungarian Academy of Sciences, 1981.
7. Organization of emergency medical aid to the population in case of natural disasters and other emergencies: Ed. V.V. Meshchkov. M., 1992.
8. Pozharsky V.F. Polytrauma of the musculoskeletal system and their treatment at the stages of medical evacuation. - M .: Medicine, 1989.
9. Reinberg S.A. X-ray diagnostics of bone and joint diseases. - M .: Medicine, 1964.
10. Rozhinsky M.M. Mirjalilov V.M. Methods of examination of traumatological and orthopedic patients. 2006.
11. Guide to Neurotraumatology - Ed. A.I. Arutyunov. - M .: Medicine, 1979.
12. Sagymbaev MA, "Diagnostics and treatment of early traumatic complications of closed chest injuries" Bishkek, 2007
13. A.P. Sereda, A.A. Gritsyuk, K.B. Zelenyak, A.B. Serebryakov. Risk factors for infectious complications after knee arthroplasty. // J. "Infections in surgery" //, 2010, Volume 8, No. 4, pp. 67 - 76.
14. Sokolov A.V. Traumatology department of the polyclinic. - M., 1989.
15. Ugryumov V.M., Babichenko E.I. Closed injuries of the spine and spinal cord. –L .: Medicine, 1973.
16. Chernavsky V.A., Abdurazakov U.A., "Diagnostics and treatment of fractures and dislocations" Almaty, 2001
17. Cherkes-Zade D.I., Kamenev Yu.F. Treatment of pelvic fractures in polytrauma. - Tbilisi. 1990.
18. Shaposhnikov Yu.G., Maslov V.I. Military field surgery. - M .: Medicine, 1995.
19. Shabalov N.P., "Childhood Diseases" Moscow 2002
20. Yumashev G.S., Epifanov V.A. Operative traumatology and rehabilitation of patients with injuries of the musculoskeletal system. - M .: Medicine, 1983.
21. Yumashev G.S., Silin L.L. Damage to the vertebral bodies, intervertebral discs and ligaments. - Tashkent: Medicine, 1971.
22. World Federation of Medical Education (WFME) International Standards for Improving the Quality of Postgraduate Medical Education (WFME, 2015).
23. 22. Competence catalog (postgraduate level) in the specialty "General practitioner" 2018

https://www.kgma.kg/index.php/ru/	KSMA website I.K. Akhunbaeva
www.kyrgyzstanvsl.org	Kyrgyz virtual scientific library
www.library.kgma.kg	Electronic resource "Electronic library" KSMA

Teaching materials in the sector of electronic resources of the KSMA library

1. 80 lectures on surgery. M.M. Abakumov (2008)
2. 100 clinical analyzes. Surgery. J.A. Gossage (2009)
3. Abdominal surgical infection. Ed. V.S.Savelieva, B.R. Gelfanda (2006)
4. Abdominal surgery. In 2v. Vol. 1. R.A. Grigoryan (2006)
5. Abdominal surgery. In 2v. T.2. R.A. Grigoryan (2006)
6. Topical issues of surgery. Ed. A.N. Kosintsa (2010)
7. Alloplasty of the trachea and bronchi. F.F. Amirov (1973)
8. Aortic aneurysms. L.A. Bockeria
9. Atlas of hernia operative surgery. V.N. Egiev (2003)
10. Atlas of operations on the liver. YM Dederer (1975)
11. Atlas of operations on the esophagus, stomach and duodenum. A.A. Shalimov (1975)
12. Atlas of Thoracic Surgery. M.K. Ferguson (2009)
13. Atlas of surgery of the upper gastrointestinal tract ... Ed. P. Clavien (2009)
14. Balloon angioplasty for lower limb ischemia. I.I. Zatevakhin
15. Diseases of the appendix. P.F. Kaliteevsky (1970)
16. Video endoscopic surgery of esophageal achalasia. V. I. Oskretkov (2013)
17. Video endoscopic surgery of the esophagus. V. I. Oskretkov (2004)
18. Intranasal surgery. Electronic resource. F.S. Bokshtein
19. Reconstructive surgery of soft tissues of the maxillofacial area. Ed. A.I. Nerobeeva (1997)
20. Reconstructive operations of the nose, throat, ear. S.A. Proskuryakov (1947)
21. Hemostasis and sealing of sutures. Operations on internal organs. V.A.Popov (2008)
22. Purulent surgery. Atlas. S.V. Goryunov (2004)
23. Purulent-septic complications of acute surgical diseases in children. V.G. Tsuman (2005)
24. Hospital surgery, ed. L.N.Bisenkova (2005)
25. Abdominal hernia. V.V. Shimko (2010)
26. Diagnostics and X-ray surgical treatment of rheumatic heart diseases. Ed. L.S.Kokova (2006)
27. Diagnostic reference book of the surgeon. V.N. Astafurov (2003)
28. Differential diagnosis of surgical diseases of the maxillofacial region. IN Mukovozov (1982)
29. Shine Common Sense in Emergency Abdominal Surgery. Moshe Shine
30. Selected Lectures on Emergency Abdominal Surgery. D.V. Garbuzenko (2012)
31. Selected lectures on operative surgery and wedge anatomy by V.D. Ivanov (2009)
32. Selected Lectures on Faculty Surgery. N.Yu. Kokhanenko
33. An illustrated guide to endoscopic surgery. S.I. Emelyanov (2004)
34. Instruments and devices for minimally invasive surgery. S.I. Emelyanov (2004)

35. Use of lasers in cardiovascular surgery .. VM Shipulin (2010)
36. Cysts, fistulas of the pancreas and their complications. I.N. Grishin (2009)
37. Valve-saving reconstructive surgery in surgery .. B.A. Konstantinov (1989)
38. Clinical and anatomical substantiation of operations .. V.D. Ivanova (2010)
39. Clinical anatomy for surgeons performing laparoscopic and thoracoscopic operations. Ed. R. Savalgi (2000)
40. Clinical anatomy and operative surgery of the pelvis. V.D. Ivanova (2011)
41. Clinical Anatomy and Operative Surgery. V.K.Tatyanchenko (2000)
42. Clinical anatomy and operative surgery of the retroperitoneal space V.D. Ivanov (2010)
43. Clinical coloproctology. P.G. Kondratenko (2006)
44. Clinical operative coloproctology. Ed. V.D. Fedorova (1994)
45. Clinical operative maxillofacial surgery. V.N.Balin (1998)
46. Clinical Surgery. In 3v. Vol. 1. Ed. V.S. Savelyeva (2008)
47. Clinical Surgery. In 3v. T.2. Ed. V.S. Savelyeva (2009)
48. Clinical Surgery. V.L. Anzimirov (1988)
49. Clinical care of surgical patients. A.A. Shevchenko (2007)
50. Colorectal surgery. Ed. R.K.S. Phillips (2009)
51. Scar correction. Edited by K.A. Arndt (2009)
52. Facial cosmetic surgery. I.A.Frishberg (1984)
53. Blood preservation in cardiac surgery. V.M.Shipulin (2010)
54. Course of lectures on general surgery. V.I.Malyarchuk, Yu.V. Pautkin
55. Course of lectures on faculty surgery. I.A. Krivoruchko (2006)
56. Laparoscopic and Thoracoscopic Surgery. K. Franzides (2000)
57. Laparoscopic surgery. Atlas. Theodore N. Pappas (2012)
58. Lectures on cardiovascular surgery. Ed. L.A. Bockeria (1999)
59. Treatment of trophic ulcers of the lower extremities. E.M. Lipnitsky (2001)
60. Minimally invasive surgery for bile duct pathology. M.E. Nichitailo (2005)
61. Emergency abdominal surgery. N.A. Maistrenko (2002)
62. Emergency pancreatology. A. L. Kostyuchenko, V. I. Filin (1999)
63. Emergency surgery of the abdominal organs. N.Yu. Kokhanenko (2007)
64. Emergency surgery of the abdominal organs. R.L. Akhmetshin (2013)
65. Unformed intestinal fistulas and purulent peritonitis. N.N. Kanshin (2007)
66. General and emergency surgery. Edited by Simon Paterson-Brown (2010)
67. General surgery in tests. Ed. V. I. Oskretkov (2007)
68. General surgery. In 2 volumes.Vol. 1. G.P. Rychagov (2008)
69. General surgery. In 2 volumes.Vol.2. G.P. Rychagov (2009)
70. General surgery. V.I.Struchkov, Yu.V. Struchkov (1988)
71. General surgery. V.K.Gostishchev (2002)
72. General surgery. Ed. N.A. Kuznetsova (2009)
73. General surgery. S.V. Petrov (1999)
74. General surgery. S.V. Petrov (2014)
75. Operative purulent surgery. V.K.Gostishchev (1996)
76. Operative surgery and topographic anatomy. MAMescheryakova (2005)
77. Operative surgery and topographic anatomy. A.V. Fishkin (2005)
78. Operative surgery and topographic anatomy. G.E. Ostroverkhov (1996)
79. Operative surgery and topographic anatomy. G.E. Ostroverkhov (2005)
80. Operative surgery and topographic anatomy. O.P.Bolshakov (2001)
81. Operative surgery and topographic anatomy. Ed. V.V. Kovanova (2001)
82. Surgical access to the thoracic and lumbar vertebrae. A.A. Korzh (1968)
83. Operating technique and conditions for optimal wound healing. J. Zoltan
84. Complications in abdominal surgery. V.V. Zhebrovsky (2006)

85. Fundamentals of Operative Surgery. O.B. Begishev (2002)
86. Fundamentals of caring for patients with a surgical profile. L.A. Volkov (2010)
87. Fundamentals of Surgical Patient Care. A.A. Glukhov (2008)
88. Osteomyelitis. G. N. Akzhigitov. (1986)
89. Acute appendicitis A.G. Krieger (2002)
90. Essays on purulent surgery. V.F. Voino-Yasenetsky (2000)
91. Essays on the surgery of acute cholecystitis. O.E. Bobrov (2008)
92. Errors, dangers and complications in abdominal surgery. R. A. Omorov, R. K. Beishenbaev (2007)
93. Panaritium and phlegmon of the brush. At 3 o'clock, Part 3. A.V. Meleshevich (2002)
94. Pancreatic necrosis V.S.Saveliev (2008)
95. Pathophysiology of surgical diseases. Ed. J. Oshatsky (1968)
96. Plastic reconstructive and cosmetic surgery. V.N.Sokolov (2004)
97. Shoulder modern surgical technology. S.V. Arkhipov (2009)
98. Injury to the abdomen with concomitant injury. M.M. Abakumov (2005)
99. Postoperative pain. Ed. F. Michael Ferrante (1998)
100. Workshop of operations and manipulations. A. V. Kolsanov (2012)
101. Workshop on the course of general surgery. P.N. Zubarev (2004)
102. Workshop on the treatment of varicose veins. G.D. Konstantinova (2006)
103. A practical guide to topographic anatomy. V.V. Kovanov (1967)
104. Applied Laparoscopic Anatomy. G.J.Wind (1999)
105. Proctology. V.D. Fedorov (1984)
106. Professional surgical hand diseases. M.A. Elkin (1971)
107. Heart wounds. V. I. Bulynin (1989)
108. Early postoperative complications in patients with peptic ulcer disease .. D.M. Krasilnikov (2005)
109. Widespread purulent peritonitis. V.V.Boyko, I.A.Kryvoruchko (2008)
110. Treatment results for obstructive uropathy. A.G. Pugachev (2005)
111. Clinical Surgery Guide. Ed. P.G. Kondratenko (2005)
112. Guide to Emergency Abdominal Surgery. M.M. Abakumov (2004)
113. Preparation guide. N.I. Goncharov (1994)
114. Guide to Experimental Surgery. B.K.Shurkalin (1998)
115. Sepsis at the beginning of the XXI century. Ed. V.S.Saveliev (2006)
116. Sepsis and multiple organ failure. V.F.Saenko (2005)
117. Sepsis, etiology, immunopathogenesis, the concept of modern immunotherapy. V.K. Kozlov (2007)
118. Cardiovascular Surgery. V.I.Burakovsky (1989)
119. Symptoms and syndromes in surgery. N.S. Androsov
120. Symptoms and syndromes in surgery. Electronic resource. I.M. Matyashin (1975)
121. Hemostasis system. For operations on the heart and great vessels. I.I.Dementyeva (2009)
122. Vascular suture. Ed. V.F.Baitinger (2005)
123. Adhesive disease of the peritoneum. I.A. Chekmazov (2008)
124. Special techniques of acupuncture and moxibustion. K.K.Schnorrenberger (2007)
125. Handbook of surgery. Electronic resource.
126. Surgeon's Handbook. Wounds and wound infection. Yu.K. Abaev (2006)
127. Diagnostic and surgical standards. Ed. A. Shvetskiy (2000)
128. Therapeutic endoscopy of the gastrointestinal tract. H.J. Chun (2017)
129. Technique for performing surgical operations. L.E.Kotovich (1985)

130. Topographic anatomy and operative surgery. I.I.Kagan (2011)
131. Thoracic surgery. Ed. L.N.Bisenkova (2004)
132. Thoracoscopy in emergency thoracic surgery. O.M. Avilova (1986)
133. Transplantology. Ed. V. I. Shumakova
134. Retaining cystostomy. G.K. Zherlov (2004)
135. Knots in surgery. I.V.Sleptsov (2000)
136. Patient care in a surgical clinic. M.A. Evseev (2008)
137. Military field surgery textbook. Ed. A.N. Berkutova (1973)
138. Faculty surgery lecture notes. E.A. Kochnev (2005)
139. Surgical anatomy of the chest, abdomen and pelvis. A.A. Loyt (2006)
140. Surgical anatomy of the pancreas. V.M. Kopchak (2011)
141. Surgical anatomy of fascia and cellular tissue .. VV Kovanov (1961)
142. Surgical care in clinics and outpatient clinics. Ed. B.M. Khromov (1980)
143. Nursing Surgical Diseases. S.N. Muratov
144. Surgical diseases. A.I.Kirienko (2011)
145. Surgical diseases. In 2 volumes.Vol. 1. Ed. V.S.Savelieva (2005)
146. Surgical diseases. In 2 volumes.Vol.2. Ed. V.S.Savelieva (2005)
147. Surgical diseases. M.I.Kuzin (2002)
148. Surgical diseases. Ed. V.D. Fedorova (2005)
149. Surgical diseases. Ed. M.I. Kuzina (2015)
150. Surgical diseases. Ed. M. I. Kuzina
151. Surgical interventions and anesthesia. A.V. Prokhorov (2007)
152. Surgical infections of the skin and soft tissues. S.F.Bagnenko (2009)
153. Surgical methods for the treatment of periodontal diseases. A.I. Grudyanov (2006)
154. Surgical suture.
155. Surgical suture. G.M. Semenov (2001)
156. Surgical suture material. D.N.Bontsevich (2005)
157. Surgical treatment of diseases and injuries of the ear, throat and nose. V.V.Shapurov (1946)
158. Surgery questions and answers. Electronic resource. Ya.Ya. Kovalenko
159. Thoracic duct surgery. M.I. Perelman (1984)
160. Chest wall surgery. A.A. Vishnevsky (2005)
161. Surgery to study and practice. M. Mueller (2006)
162. Gallbladder and bile duct surgery. I.M. Talman (1963)
163. Disaster surgery. XAMusalatov (1998)
164. Surgery of the hand and fingers. B. Boychev (1971)
165. Liver surgery. B. I. Alperovich (2010)
166. Surgery for injuries of the larynx and trachea. V.G. Zenger (2007)
167. Breast injury surgery. E.A. Wagner (1981)
168. Surgery of heart injuries in case of wound polytrauma and shock. P.N. Zamyatin (2003)
169. Pancreas surgery. M.V. Danilov (1995)
170. Outpatient Surgery. F.Kh. Nizamov (2002)
171. Surgery of malformations of the colon in children. YF Isakov (1972)
172. Rectal cancer surgery. T.S.Odaryuk (2005)
173. Foot surgery. D.I. Cherkes-Zade (2002) Electronic resource
174. Surgery. E. Rafteri (2006)
175. Choledocholithiasis. N.A. Maistrenko, V.V. Stukalov (2000)
176. Private surgery. Vol. 1. Ed. Yu.L. Shevchenko (1998)
177. Private surgery. T.2. Ed. Yu.L. Shevchenko (2000)
178. Maxillofacial Surgery. A.A. Timofeev (2010)

179. Emergency biliary tract surgery. P.G. Kondratenko (2005)
180. Emergency surgery of the heart and blood vessels. Ed. M.E. De Becky (1980)
181. Endoscopic abdominal surgery. A.S. Balalykin
182. Endoscopic spinal neurosurgery. E.G. Pedachenko (2000)
183. Endoscopic thoracic surgery. A.M.Shulutko (2006)
184. Endoscopic surgery in children. A.F.Dronov (2002)
185. Endoscopic Surgery. I.V. Fedorov (2009)
186. Epithelial coccygeal passage. Yu.V. Dultsev (1988)

Library of the KSMA named after I.K. Akhunbaeva

The library provides services to the readers of the Faculty of **Postgraduate Medical Education** :

1. Book storage subscription (Akhunbaeva st., 92 main building, basement room, office 035)
2. Subscription service for readers of the Faculty of General Medicine with English as the language of instruction in the main building (Akhunbaeva st., 92, main building , 1st floor, room 33)
3. Subscription service for readers of general education disciplines, lyceum and preparatory course (Akhunbaeva st., 92, educational building No. 4)
4. Reading room in the main building for 151 seats (Akhunbaeva st., 92 main building, 1st floor, office 36)
5. A reading room for scientific and medical information for 10 seats (Akhunbaev st., 92, main building, 1st floor, office 36a)
6. Reading room for readers of the Faculty of Medicine with English language of instruction in the main building for 10 seats (Akhunbaeva st., 92 main building, 1st floor, room 33)
7. Reading room in the 4th educational building for 20 seats (Akhunbaeva st., 92 educational building No. 4)

5. Requirements for the conditions for the implementation of the residency program in the specialty "Traumatologist-orthopedist"

5.1 Requirements for educational, methodological and informational support of the program

The educational and methodological support of the BPEP residency in the specialty "Traumatologist, orthopedist" corresponds to the educational goals and Requirements for the specialty:

- BPEP PGME in the specialty has all the necessary types of practices for gaining practical experience related to the formation of professional competencies of a traumatologist, orthopedist.
- Availability of a catalog of competencies in the specialty "Traumatologist, orthopedist";
- Availability of educational and methodological material on the implementation of BPEP;
- The disciplines in the BPE are not duplicated, but supplement and deepen the content of the educational material, and are aimed at the formation of the corresponding competencies among the residents (competency matrix);

- The presence in the content of academic disciplines of a professional context corresponding to the Requirements " Traumatologist, orthopedist ";
- Availability of a monitoring system for the progress of residents on the roadmap;
- The presence of a resident's diary specializing in traumatologist, orthopedist ;
- Opportunities for residents to independently determine the disciplines (elective course) of their choice;
- The procedures for assessing the level of knowledge of students correspond to the planned learning outcomes and the goals of the program, while the residents are fully informed about the procedure for assessing them, about the expected types of monitoring, about the requirements for residents about the criteria for assessing their knowledge.
- Clinical residents are provided with the necessary educational and material resources of the KSMA: an electronic library (www.library.kgma.kg), a sufficient number of textbooks, teaching aids, monographs and medical journals.
- The library fund for residents is 100% provision.
- Possibility of internship in the countries of near and far abroad at the choice of the resident within the framework of external "academic mobility".
- Involvement in the educational process of clinical mentors from among practical health care;

- Regular monitoring of teaching staff activities, systematic assessment of the competence of teachers.
- Availability of a system of continuous training of teaching staff;
- Active participation of the teaching staff of the KSMA in the development of the system of medical education and science of the Kyrgyz Republic.
- Active scientific activity of residents. The possibility and availability of publications of the results of the scientific work of residents. Availability of NSO department.
- Information and technological support of the main production processes: a sufficient number of computers, access of all structural units to the Internet;
- Development of distance learning technologies. Availability of the Center for Distance Learning and Continuous Training;
- Transparency and objectivity of the selection and admission procedure for students;

5.2. Requirements for personnel conditions for the implementation of the residency program in the specialty "Traumatologist, orthopedist"

Department : Traumatology, Orthopedics and ES KSMA
Head of the Department : Doctor of Medical Sciences, Professor, Academician Dzhumabekov S.A.
Location: Bishkek, Bishkek Scientific Research Center of Traumatology and Orthopedics (BSRCT&O) (206 Krivonosova Street).
Phone : 0555213480
E-mail : S.djumabekov @ mail.ru
Clinical base : BSRCT&O

Location: Bishkek, Bishkek Scientific Research Center of Traumatology and Orthopedics (BSRCT&O) (206 Krivonosova Street).

Residency training in specialty 028 "Traumatologist, orthopedist" is provided by highly professional teaching staff of the Department of Traumatology, Orthopedics and ES. Currently, at the Department of Traumatology, Orthopedics and ES of the KSMA, 2 academicians of the National Academy of Sciences of the Kyrgyz Republic, 1 member is working on a special subject. corr. National Academy of Sciences of the Kyrgyz Republic, 5 doctors of medical

sciences, 5 professors, 3 associate professors, 13 candidates of medical sciences, 18 assistants with extensive teaching experience. At the same time, the program of 1 year of study corresponds to the training program for general medical practice, in connection with which the teaching staff are involved in 4 cycles according to the curriculum.

According to requirements PGME, specialty 028 "Traumatologist, orthopedist", the training of a resident is carried out under the guidance and supervision of a clinical director appointed by order of an educational organization or research organization and a clinical mentor appointed from among the workers of the healthcare organization, which is a clinical base. Traumatologists, orthopedists, doctors of narrow specialties, as well as other specialists working in the healthcare system are involved in the postgraduate training of residents in the specialty "Traumatologist, orthopedist".

According to requirements PGME of a minimum of the content of the residency educational program, practical training is at least 90%, in connection with which the training of the resident is carried out under the guidance and supervision of a clinical director appointed by order of the educational organization or research organization and a clinical mentor appointed from among the employees of the healthcare organization, which is a clinical base.

Clinical supervisor and mentor workload ratio is 1: 4 (one clinical supervisor / mentor supervises four residents).

Criteria for the appointment of clinical leaders:

• science degree;

• medical work, at least 25% of the main working time;

• continuous professional development in pedagogy and psychology of higher education and the main specialty, confirmed by certificates;

Criteria for Appointing Clinical Mentors:

• continuous work experience in the specialty for at least 5 years;

• first or highest qualification category;

• continuous professional development in pedagogy and psychology of higher education and the main specialty, confirmed by certificates;

Functional duties of the teaching staff participating in the postgraduate training of residents in the discipline "traumatology, orthopedics":

- be aware of the international standards of the World Federation of Medical Education (WFME) to improve the quality of postgraduate medical education in traumatology, orthopedics;
- have a complete understanding of the requirements of postgraduate medical education in the Kyrgyz Republic in the discipline "Traumatology, Orthopedics" and the educational program for training in residency;
- have a complete understanding of the requirements for the level of training of a graduate of residency in the specialty "Traumatologist, orthopedist", the composition of knowledge, skills and attitudes defined in the catalog of competencies in the specialty;
- participate in the development of educational residency programs in the specialty;
- participate in the formation of a contingent of residents in the specialty "Traumatologist, orthopedist", carry out active work among students and graduates to attract residents to this specialty;
- ensure a high level of teaching disciplines through the use of traditional and introduction of innovative technologies, in particular distance learning, and interactive teaching methods.
- for the direct supervision of residents, the formation of an individual plan for passing the residency, preparation for the final certification, as well as for the

coordination of the educational process, a clinical director / curator is approved from among the full-time faculty.

Functional responsibilities of a clinical mentor:

- development of practical skills of an intern, work with a patient is carried out under the guidance of a clinical mentor;
- the clinical mentor ensures the implementation of the curriculum, the acquisition of practical skills by the intern, the execution of manipulations in accordance with the catalog of competencies in the specialty;
- teaches effective teamwork in collaboration with other healthcare professionals;
- teaches the use of clinical guidelines and protocols based on evidence-based medicine;
- conducts all types of monitoring according to standardized assessment forms (mini-clinical exam, assessment of procedural skills, assessment of general competencies), approved by the educational organization together with the curriculum;
- takes part in the final state certification of residents;
- constantly keeps track of attendance with drawing up a timetable for each resident and provides the educational organization with information about residents who have missed classes;
- regularly takes place trainings / seminars to improve the skills of clinical teaching and mentoring.

Department of Traumatology, Orthopedics and ES KSMA named after I.K. Akhunbaeva

Distribution of the staffing units of the teaching staff and UVP

in clinical residency in the specialty "Traumatologist, orthopedist"

for the 2021-2022 academic year

No.	**Last name, first name PPP / UVP**	**position**	**bid**	**Budget/ the contract**	**External will match (from where)**
1.	Dzhumabekov S.A.	Doctor of Medical Sciences, Professor	0.5	the contract	BSRCT&O
2	Sulaimanov Zh.D.	Doctor of Medical Sciences, Professor	0.5	the contract	KMIofAT&R
3	Sagynbaev M.A.	Doctor of Medical Sciences, Professor	0.25	the contract	BSRCT&O
4	Anarkulov B.S.	Doctor of Medical Sciences, Professor	0.25	the contract	BSRCT&O
5	A.A. Kubatbekov	Ph.D., assistant	0.25	Budget	BSRCT&O
6	Usenov A.S.	Candidate	0.5	the contract	Basic

		of Medical Sciences, Associate Professor			
7	Ismayilov B.T.	Candidate of Medical Sciences, Associate Professor	0.25	the contract	BSRCT&O
eight	Atakulov N.A.	Assistant	0.5	the contract	Basic
nine	Sooronkulov U.P.	Assistant	0.5	the contract	Basic
ten	Kurmanbaev U.A.	Assistant	0.5	the contract	BSRCT&O
eleven	Kalchaev B.N.	Ph.D., assistant	0.25	the contract	BSRCT&O

Staffing for the implementation of the residency program in the specialty "Traumatologist, orthopedist" in special disciplines

No.	**Full name**	**Position Academic degree**	**Specialty (indicate all available specialties)**	**Medical category**	**Workplace**	**External will match (from where)**	**Telephone**
1.	Dzhumabekov S.A.	Doctor of Medical Sciences, Professor	Traumatologist-orthopedist	The highest	BSRCT&O	BSRCT&O	0555090609
2	Sulaimanov Zh.D.	Doctor of Medical Sciences, Professor	Traumatologist-orthopedist	The highest	BSRCT&O	KMIofAT&R	0555409972
3	Sagynbaev M.A.	Doctor of Medical Sciences, Professor	Traumatologist-orthopedist	The highest	KNIIKiVL	BSRCT&O	
4	Anarkulov B.S.	Doctor of Medical Sciences, Professor	Traumatologist-orthopedist	The highest	BSRCT&O	BSRCT&O	0777909769
5	A.A. Kubatbekov	Ph.D., assistant	Traumatologist-orthopedist	The highest	BSRCT&O	BSRCT&O	055750750

							7
6	Usenov A.S.	Candidate of Medical Sciences, Associate Professor	Traumatologist-orthopedist	The highest	BSRCT&O	Basic	0551746494
7	Ismayilov B.T.	Candidate of Medical Sciences, Associate Professor	Traumatologist-orthopedist	The highest	BSRCT&O	BSRCT&O	0706375121
eight	Atakulov N.A.	Assistant	Traumatologist-orthopedist	-	BSRCT&O	Basic	0553929390
nine	Sooronkulov U.P.	Assistant	Traumatologist-orthopedist	-	BSRCT&O	Basic	0706667337
ten	Kurmanbaev U.A.	Assistant	Traumatologist-orthopedist	The highest	BSRCT&O	BSRCT&O	0550122316
eleven	Kalchaev B.N.	Ph.D., assistant	Traumatologist-orthopedist	The highest	BSRCT&O	BSRCT&O	0555457070

Staffing for the implementation of the residency program in the specialty "Doctor-surgeon" in special and related disciplines

No.	**Full name**	**Position Academic degree**	**Specialty (indicate all available specialties)**	**Medical category**	**Workplace**	**External will match (from where)**
1	Abaeva T.	Ph.D.	Operative surgery and topographic anatomy	The highest	Department of Anatomy	
2	A.I. Kadyrova	Candidate of Medical Sciences, Associate	Radiation diagnostics	The highest	Department of Radiation Diagnostics and	

		Professor.			Therapy	
3	Turdumambetova G.K.	Candidate of Medical Sciences, Associate Professor	Osteoarticular phthisiology	the highest	Department of Phthisiology	
4	Mamatov S.	Dr. med.	Rheumatology	The highest	Department of Hospital Therapy with the Course of Hematology and Occupational Pathology	
5	Sultanalieva	Candidate of Medical Sciences, Associate Professor	Pediatric traumatology	The highest	Department of Pediatric Surgery	
6	Sayakov U.K.	Candidate of Medical Sciences, Associate Professor	Bone oncology		Department of Oncology	

Staffing for the implementation of the residency program in the specialty "Traumatologist, orthopedist" in the elective disciplines

No.	**Full name**	**Position Academic degree**	**Specialty (indicate all available specialties)**	**Medical category**	**Workplace**	**External will match (from where)**
1	Mukashev M.Sh.	Doctor of medical sciences, prof.	Medicine court	The highest	KSMA	
2	Ysmailova B.T.,	Candidate of Medical Sciences, Assoc.		The highest	NG	
3	Dzhumabekov S.A.	Prof.	Traumatology	the highest	BSRCT&O	

5.3 Residency Program Logistics Requirements
in the specialty "Doctortraumatologist, orthopedist "

Material and technical equipment
Department of Traumatology, Orthopedics and Extreme Surgery

1. Classrooms

Location: Bishkek, st. Krivonosova, 206, BSRCT&O

No.	Room number and name	A place location	square	Number of landing places
1. Administrative premises *				
1	**Office manager department academician Dzhumabekova S.A.**	BSRCT&O	30m 2	ten
2	**Head teacher's office**	BSRCT&O, Department of Traumatology No. 1	18m 2	ten
	Total		48m 2	
2. Study rooms **				
1	**Lecture hall number 1**	BSRCT&O	108m 2	100
2	**Study room number 2**	BSRCT&O, 1st floor	30m 2	thirty
3	**Study room number 3**	Medical Center KSMA	18m 2	12
4	**Study room number 4**	Medical Center KSMA	12m 2	ten

For implemention of various types of educational work diffrent educational technologies are used, such as practical exercises using role-playing educational games, the method of "small groups", analysis of clinical cases, solving situational problems. Residents independently fill in case histories, outpatient records of patients, interpret data from laboratory and instrumental research methods.

Role-playing educational games are used in practical exercises to work out the method of questioning (collecting and detailing complaints, anamnesis data) in case of pathology of the musculoskeletal system. The method of "small groups" is used for practicing skills by residents on each other (examination, palpation, measuring the lengths of limbs, circumferences, range of motion in the joints ...), for monitoring patients under the supervision of a clinical leader / mentor. The study of symptoms, syndromes and diseases of endocrine diseases is supported by

the analysis of clinical cases, the solution of situational problems, the interpretation of data from laboratory and instrumental research methods.

At the department residents can study the diagnostic capabilities of clinical research methods and their importance in pathology of the musculoskeletal system in detail, conduct department research work under the leadership of the head with their subsequent presentation at the department conference The best of them participate in international student scientific and practical conferences ...

2. List of technical means

1. Computer - 3
2. Projector - 2
3. Laptop - 3
4. Printer - 2

3. Visual aids

1. Tables
2. Posters on Traumatology and Orthopedics
3. Case histories, outpatient cards, situational tasks
4. Sets of X-rays
5. Presentations of lectures (Power Point)
6. Thematic patients from the departments of BSRCT&O

The practical part of the classes is carried out in the following clinical units:

1. Traumatological and orthopedic departments of BSRCT&O

2. Burn department

3. Department of neurotrauma

4. Department of intensive care

5. Clinical Skills Center of KSMA - residents conduct physical examinations on dummies, phantoms, practical skills in emergency conditions (CPR, skills in using a defibrillator, Game dashing, Safari, gastric lavage, stopping bleeding, etc.)

The lecture halls of the medical academy and classrooms of the department that are equipped with microphones, multimedia systems, a screen, etc are used for lectures. Presentations of lectures on all topics of the lecture course (Power Point).

6 REQUIREMENTS FOR THE ASSESSMENT OF THE PROGRAM / QUALITY OF PREPARATION OF RESIDENCY FOR THE SPECIALTY "DOCTOR-TRAUMATOLOGIST, ORTHOPEDIC"

Admission to residency is carried out on a general basis in accordance with the "Regulations on residency", approved by the Government of the Kyrgyz Republic of December 11, 2017 No. 798 "On Amendments to the Resolution of the Government of the Kyrgyz Republic" On Postgraduate Medical Education in the Kyrgyz Republic "dated July 31, 2007 No. 303 and dated August 30, 2018 No. 411 "On Amendments to the Resolution of the Government of the Kyrgyz Republic" On Postgraduate Medical Education in the Kyrgyz Republic "dated July 31, 2007 No. 303".

The number of places for residency is determined annually in accordance with the needs of practical health care and the capabilities of clinical bases to provide high-quality practical training and is approved by the order of the Ministry of Health of the Kyrgyz Republic.

The Ministry of Health of the Kyrgyz Republic approves by order a list of clinical bases indicating the maximum number of residents who can undergo the practical part of the training in healthcare organizations that are clinical bases. At the same time, clinical bases should provide an optimal load for each resident to acquire practical skills, based on the number of hospitalizations in the hospital and the number of visits to the FMC.

For admission to the residency in the specialty "Doctor-surgeon" it is necessary to have a diploma of basic medical education in the specialties "General Medicine".

Entrance examinations for residency at KSMA are held in agreement with the Ministry of Health of the Kyrgyz Republic. The staff of the teaching staff of the Department of Hospital Surgery with the course of the operative KSMA named after IK Akhunbayev compiled 500 tests.

Methods for assessing the development of the training program by residents include the following types of control / certification: • current • intermediate • final (certification)

Ongoing assessments are carried out by on-site clinical mentors after each rotation cycle or as needed. The form and content of the current control are determined by the curriculum for the specialty. After each module (theoretical discipline), residents pass a written examination (testing), as well as an oral examination in the form of analysis and discussion of clinical cases.

Monitoring tools:

• control over the maintenance of the Clinical Resident's Diary • clinical examination • assessment of the performance of procedural skills • assessment of general competencies.

Throughout the training period residents keep a Diary, where they document the stages of the residency curriculum, acquired competencies, exam results for completed modules and other information. Passage of all stages is confirmed by the signatures of the responsible mentors / teachers and the leader.

Interim certification includes semi-annual certification, and transfer certification after the first year of study. For transferable certifications, a special type of exam is used, including, if possible, OSKE - an objective structured clinical examination in a discipline.

Final State Attestation (IGA) is carried out by an independent commission created by the Ministry of Health of the Kyrgyz Republic. The commission includes representatives of educational organizations, clinical bases, and professional medical associations in accordance with the "Regulation on certification".

State (final) certification for the main professional educational program in the specialty "Traumatology, Orthopedics" (residency) is carried out through an exam and should identify the theoretical and practical training of a specialist doctor in accordance with the content of the educational program.

A resident doctor is admitted to state (final) certification after successfully mastering the work programs of disciplines (modules), a training simulation course and completing an internship program in the amount stipulated by the curriculum.

Persons who have mastered the basic professional educational program of higher professional education in the specialty "Traumatology, orthopedics" and have successfully passed the state (final) certification, receive a state-recognized document.

Residents must submit to the IGA resident's diary and a list of manipulations and procedures indicating the number of manipulations performed, certified by the signature of the responsible clinical director and mentor.

6.1 EVALUATION FUNDS
for admission to clinical residency
in the specialty "Traumatologist, orthopedist"

1. List the conditions under which skeletal traction is contraindicated:

1. lack of a spoke;
2. **the presence of infection at the site of the wire;**
3. lack of a standard bus;
4. lack of an electric drill;
5. patient's age

2. **Indicate the correct direction of the wire passing through the superior metaphysis of the tibia:**

1. **outside to inside** ;
2. from the inside out;
3. front to back;
4. from back to front;
5. sideways

3. Indicate what determines the need for a strict choice of place, level and direction when holding a spoke:

1. the possibility of muscle injury;
2. **the possibility of damage to blood vessels;**
3. better anesthesia conditions;
4. less resistance of the bone to the conduction of the spoke;
5. the possibility of joint damage

4. **Mark the correct direction for passing the wire through the supracondylar area of the thigh:**

1. front to back;
2. outside to inside;
3. **from the inside out;**
4. from back to front;
5. obliquely to the side

5. Select the types of fractures for which skeletal traction is preferable :

1. fracture of both bones of the forearm;
2. **fracture of both bones of the lower leg with displacement;**
3. fracture of the tibial metaphysis without displacement;
4. fracture of the elbow joint;
5. spine fracture

6. List the signs of increasing limb compression with a plaster cast:

1. no pain;
2. pale pink colored nail plate;
3. **increasing pain, cyanosis of the fingers;**
4. a crunching feeling in the area of the fracture;
5. warm limb

7. When passing the wire through the calcaneus, damage to the posterior tibial artery is possible :

1. in the direction from the inside out;
2. **outside to inside;**
3. axially from inside to outside;
4. axially from outside to inside;
5. from back to front;

8. What kind of plaster cast is applied for contracture of the knee joint to eliminate contracture:

1. bridging;
2. coxitis;
3. 3 back plaster splint;
4. **redressing;**
5. circular

9. **What is the name of the operation to open the knee joint:**

1. fasciotomy;
2. myotomy;
3. **arthrotomy;**
4. tenotomy;
5. trepanation;

10. **Which of the following symptoms is positive for damage to the meniscus:**

1. Kocher;
2. Langanbek;
3. **Baykov ;**
4. Garanjo,
5. Volkovich;

11. What symptom is typical for damage to the anterior cruciate ligament:

1. blockade symptom;
2. Chiklin's "click" symptom;
3. **drawer symptom;**
4. lateral deviation of the lower leg;
5. Baykov's symptom;

12. What is the name of purulent inflammation of the knee joint:

1. hemarthrosis;

2. synovitis;
3. tenosynovitis;
4. coxitis ;
5. **drives.**

13. What is the position of the knee joint called physiologically moderately bent at an angle:

1. 110°
2. 130 °
3. **145 °**
4. 170 °
5. 90

14 . Where the patella's own ligament is attached:

1. the medial condyle of the tibia;
2. the lateral condyle of the tibia;
3. the head of the fibula;
4. the medial condyle of the femur;
5. **tibial tuberosity;**

15. Which muscle flexes the lower leg:

1. quadriceps femoris muscle;
2. thin muscle of the thigh;
3. long adductor thigh muscle;
4. **biceps femoris**
5. adductor muscle of the thigh;

16. Where does the fracture line occur with an epiphyseal fracture of the tibia:

1. fracture of the middle third;
2. fracture of the upper third of the diaphysis;
3. fracture of the lower third of the diaphysis;
4. **fracture closer to the articular end;**
5. fracture of the condyles;

17. What is the name of the connection of the tibia and fibula in the distal part:

1. synostosis;
2. **syndesmosis;**
3. synchondrosis;
4. arthrosis;
5. synostosis;

18. How does the fibula end in the distal region:

1. external condyle;
2. internal condyle;
3. inner ankle,
4. **outer ankle;**
5. styloid process;

19. How to correctly measure the anatomical length of the thigh:

1. from the anterior superior iliac spine to the cleft of the knee joint;
2. from the anterior superior iliac spine to the lower edge of the patella;
3. **from the greater trochanter to the fissure of the knee joint;**
4. from the greater trochanter to the lower edge of the patella;
5. from the greater trochanter to the outer ankle;

20. How to correctly measure the anatomical length of the lower leg:

1. from the lower edge of the patella to the ankle gap;
2. from the slit of the knee joint to the slit of the ankle joint;
3. from the lower edge of the patella to the lower edge of the outer ankle;
4. **from the slit of the knee joint to the lower edge of the outer ankle** ;
5. from the knee joint to the inner ankle;

21. The "axial load" symptom is defined by:

1. in the position of the patient standing;
2. in the sitting position of the patient;
3. **in the patient's lying position;**
4. in the position of the patient sitting or standing;
5. in the position of the patient half-sitting;

22. With compression fractures of the neck of the vertebrae, the most informative is:

1. direct projection radiography;
2. radiography in a semi-profile projection;
3. ligamentography;
4. **lateral radiography** ;
5. spondylography;

23. In which position the spinal column experiences the greatest stress

1.Standing on both legs:

2. standing on one leg,
3. **3. sitting;** ...
4. 4. lying on your back;
5. 5. lying on its side;

24. In which department the spinal cord is most often damaged in a fracture of the spinal column.

1. sacral;
2. lumbar;
3. in the lower chest;
4. **in the middle cervical .**
5. upper chest;

25. Which fracture of the spine is considered unstable?

1. rupture of the supraspinous ligament;
2. unilateral subluxation;
3. vertical fracture of the body;
4. **rupture of the annulus fibrosus;**
5. compression fracture;

26. Which of the injuries of the spine is considered stable

1. rupture of the supraspinous ligament;
2. **unilateral subluxation;**
3. vertical fracture of the body;
4. rupture of the annulus fibrosus;
5. a break in the spinal cord;

27. Highlight the location of the yellow ligament of the spine.

1. on the front surface of the vertebral bodies;
2. on the back surface of the vertebral bodies;
3. **between the arches of the vertebrae;**
4. between the spinous processes of the vertebrae;
5. between the transverse processes of the vertebrae;

28. Mark the space of the spinal canal in which the cerebrospinal fluid circulates

1. epidural;
2. subdural;
3. **subarachnoid;**
4. epidural;
5. subarachnoid;

29. Specify the length of the cervical thickening of the spinal cord, from which the nerves of the upper limb arise :

1. between 1 and 4 cervical vertebrae;
2. **between 4 cervical and 1 thoracic vertebrae;**
3. between 4 and 6 cervical vertebrae;
4. between 6 cervical and 6 thoracic vertebrae;
5. between 5 cervical and 4 thoracic vertebrae;

30. Specify the length of the lumbar thickening of the spinal cord, from which the nerves of the lower extremity arise
:

1. **between 10 thoracic and 1 lumbar vertebrae;**
2. between 8 and 10 thoracic vertebrae;
3. between 12 thoracic and 2 lumbar vertebrae;
4. between 1 and 4 lumbar vertebrae;
5. between 11 thoracic and 3 lumbar vertebrae;

31. Mark the location of the first cervical root of the spinal cord:

1. in the interval between 1 and 3 cervical vertebrae;
2. in the interval between the 3rd and 6th cervical vertebrae;
3. **in the interval between the occipital bone and the atlas;**
4. in the interval between Atlas and Axis;
5. in the interval between 5 and 7 cervical vertebrae;

32. Select the processes 1 and 4 of the lumbar vertebrae, to which the square muscle of the lower back is attached

1. upper articular;
2. lower articular;
3. spinous:
4. **transverse;**

5.the body of the vertebrae;

33 ... Mark the muscle of the back adjacent to the lateral surfaces of the spinous processes of the lumbar vertebrae:

1. square muscle;
2. broad muscle of the back;
3. **back straightener;**
4. gluteus maximus;
5. trapezius muscle;

34. You can use the following acceptable methods of pain relief when correcting dislocations of the cervical vertebrae:

1. general;
2. topical solution of novocaine;
3. **the introduction of 1 ml - 1% pantopon solution;**
4. spinal anesthesia;
5. fascial anesthesia;

35. Highlight the leading criterion for the development of indications for laminectomy in complicated spinal fractures:

1. the presence of neurological disorders;
2. the nature of the fracture;
3. type of displacement of the vertebrae;
4. **the presence of signs of compression of the spinal cord or its roots;**

5. dysfunction of the pelvic organs;

36. Highlight the method of traction to immobilize the patient in the treatment of fractures of the thoracic vertebrae

1. **for the axillary areas;**
2. Gleason loop;
3. skeletal traction for the skull;
4. Shants collar;
5. traction through the heel bone;

37. What is the main goal achieved by lumbar puncture in patients with complicated vertebral fractures:

1. measurement of cerebrospinal fluid pressure;
2. decrease in cerebrospinal fluid pressure;
3. **determination of the patency of the cerebrospinal fluid of the conducting pathways;**
4. determination of the nature of the spinal cord injury;
5. determination of fat droplets;

38. Note the most adequate methods of breathing correction in patients with complicated cervical vertebral fractures:

1. the introduction of breathing stimulants;
2. **tracheostomy and artificial ventilation of the lungs;**
3. breathing exercises;
4. intubation;
5. use of aerosols;

39. At what fracture of the pelvis the integrity of the pelvic ring is violated:

1. unilateral fracture of the ischium;
2. bilateral fracture of the ischium;
3. unilateral fracture of the pubic bone;
4. **unilateral fracture of the pubic and ischial bones;**

5. bilateral fracture of the pubic bone;

40. Which fracture does not violate the integrity of the pelvic ring:

1. longitudinal fracture of the sacrum;
2. longitudinal fracture of the ilium;
3. rupture of the symphysis;
4. **fracture of the pubic on one side and the sciatic on the other ;**
5. bilateral rupture of the sacroiliac joint;

41. Specify the location of the femoral vessels:

1. behind the sacrum;
2. **in front of the pubic bone;**
3. behind the pubic bone;
4. behind the ilium;
5. behind the ischial bones;

42. Which of the following symptoms that indicate damage to the pelvic organs are not the main ones:

1. **delayed urination**
2. blood at the peripheral opening of the urethra
3. presence of blood in urine
4. a symptom of a deficiency when filling and draining bladder fluid
5. presence of blood in the stool

43. The easiest complication of injury to the soft tissues of the pelvic region is:

1. **muscle failure (contractility)**
2. damage to large vessels and related complications
3. damage to large nerve trunks
4. development of purulent infection
5. penetrating wound

44. For primary surgical treatment of pelvic gunshot wounds should not do:

1. excision and dissection of damaged soft tissues
2. stopping bleeding, removing blood clots and foreign bodies
3. **plastic restoration of the damaged organ**

   (bladder, rectum, uterus, vagina, etc.)

4. osteosynthesis of broken pelvic bones
5. removal of small fragments of bones

45. Subcutaneous muscle damage most often occurs:

1. with direct trauma
2. as a result of microtrauma
3. due to a sharp uncoordinated muscle contraction
4. **due to the pathological condition of muscles and tendons**

5. The result of burn

46. Muscle stretching is usually accompanied by:

1. **hemorrhage**
2. severe edema
3. lymphadenitis
4. lymphangitis
5. parietal bone fracture

47. Differentiation of complete and partial muscle rupture should be based on all of the above, except:

1. decreased limb function
2. the extent of the edema

3. the size of the hematoma and bruising
4. **increased muscle tone**

5. Ultrasound data

48. In case of incomplete muscle ruptures during treatment, all the listed manipulations should be performed, except for:

1. immobilization
2. pain relief
3. puncture of the area of muscle damage with removal of the hematoma
4. **massage of the limb above the muscle tear**
5. Ultrasound

49. For a complete rupture of a muscle, all of the above is characteristic, except:

1. a distinct sensation of the moment of rupture
2. sharp pain
3. decreased limb function
4. **pronounced hypotonia of the limb**

5.the presence of subcutaneous hematoma

50. The clinical picture of muscle inflammation consists of all of the above, except:

1. decreased limb function
2. pain
3. **lymphadenitis and lymphangitis**
4. limb segment edema
5. temperature rise

51. With a sharp and sudden muscle tension, rupture most often occurs:

1. **at the site of attachment to the bone**
2. **at the junction of the tendon into the muscle**
3. **in the middle of the muscle**
4. **correct 1) and 2**

5. correct 1 - 2 -3

52. A tendon tearing with a bone fragment mainly occurs in case of damage:

1. achilles tendon
2. the long head of the biceps muscle on the left
3. **triceps brachii**
4. quadriceps femoris
5. sartorian thigh

53. For tearing the tendon of the long head of the biceps muscle, all of the above is characteristic, except:

1. the occurrence of acute pain in the upper third of the shoulder
2. sensations of a kind of crackling, clicking
3. **retraction of soft tissues on the anterior-inner surface of the shoulder, above which the protrusion is determined**
4. a sharp decrease in the force of flexion of the forearm in the elbow joint

5. presence of a hematoma

54. Fixation of the torn off distal tendon of the biceps brachii is the simplest and safest, and at the same time, it is carried out:

1. to the tuberosity of the radius
2. to the fascia of Pirogov
3. **to the tendon of the shoulder muscle**
4. to the shoulder muscle
5. to the achilles tendon

55. For a rupture of the quadriceps femoris muscle, all of the above is characteristic, except:

1. damage to the tendon part of the quadriceps femoris
2. lack of extension movement of the lower leg
3. **characteristic retraction of soft tissues above the patella**
4. knee instability

5. the presence of a hematoma.

56. For a typical subcutaneous rupture of the Achilles tendon, all of the above is characteristic, except:

1. tendon rupture occurs against the background of degenerative trophic changes
2. tendon rupture occurs after an unexpected, uncoordinated sharp contraction of the triceps calf muscle
3. **the rupture is more often localized at the junction of the muscle into the tendon**

4. The sharp pain and limitation of motion in the ankle joint
5.the formation of subcutaneous hematoma

57. Symptom Thompson when detecting rupture of the Achilles tendon is manifested:

1. retraction in the area of rupture of the Achilles tendon
2. inability to stand and walk on the toes of the injured leg
3. **lack of plantar flexion of the foot of the injured limb**

   with compression of the triceps muscle of the lower leg

4. a sharp limitation of supination of the foot
5. a sharp restriction of movement

58. In case of damage to the oblique muscles of the abdomen, all of the listed symptoms take place, except:

1. strong muscle tension of the anterior abdominal wall
2. increased pain when coughing, change in body position
3. **the frequent occurrence of injuries in tennis players,**

   boxers, water polo players and foil fencers

4. pain on palpation along the oblique abdominal muscles

5. presence of a hematoma

59. The most common collarbone breaks when falling:

1. on the lateral surface of the face
2. on the elbow
3. on outstretched hand
4. **with any of the above options**
5. on outstretched leg

60. For a fracture of the clavicle, all of the listed signs are characteristic, except:

1. **the upper limb is raised up and displaced posteriorly**
2. deformity and swelling above the clavicle
3. supraclavicular Evaluation Fundssa smoothed
4. distance from the spine to the medial edge of the scapula

increased on the damage side

5. subcutaneous hematoma

61. With conservative treatment of a clavicle fracture all of the listed dressings are used to immobilize the clavicle, except:

1. Kuzminsky tires
2. 8-shaped bandage
3. of Delbe's rings
4. **plaster cast according to Tourner**

5. plaster 8-shaped bandage.

62. Indications for surgical treatment of a clavicle fracture are

1. open fractures with damage or compression of the neurovascular bundle:
2. comminuted fracture of the clavicle with the risk of skin injury
3. closed comminuted fracture
4. **all of the above**

5. The transverse fracture of the clavicle

63. The following scapula fractures are clinically distinguished:

1. body
2. corners
3. offshoots
4. **all of the above**

5. arches

64. After the diagnosis of "dislocation of the forearm" is established, reduction should be resorted to

1. **immediately**
2. in 1-2 hours

3. after 3-4 days
4. in 5-6 days
5. in 24 hours

65. The most common cause of shoulder dislocation is

1. direct blow
2. rotation
3. **fall with a blow on a bent or unbent leg**
4. all of the above
5. falling from height

66. "Fresh" shoulder dislocation is called dislocation, prescription

1. **Week 1**
2. up to 2 weeks
3. 3 weeks
4. 4 weeks
5. 7 weeks

67. "Stale" shoulder dislocation is called dislocation, prescription

1. up to 2 weeks
2. Week 1
3. **3 weeks**
4. 4 weeks
5. 2 months

68. An old shoulder dislocation is called a prescription dislocation.

1. up to 2 weeks
2. Week 1
3. 3 weeks
4. **over 4 weeks**
5. over 7 weeks

69. The most common symptom for dislocation is

1. strong pain
2. "bone" crunch
3. the ability to make passive movements
4. **"springy" resistance**
5. restriction of movement

70. Fracture-dislocation of the typical symptoms is characterized by

1. strong pain
2. deformation
3. limb axis change

4. **"shortening" of the limb**
5. swelling

71. After the diagnosis of dislocation is established, reduction should be performed

1. **immediately**
2. after 2 hours
3. in a day
4. after 3 days
5. in 10 hours

72. After the dislocation of the shoulder is repositioned, immobilization is required.

1. on the headscarf
2. soft bandage Dezo
3. on the outlet bus
4. **using a Dezo plaster cast**
5. Delba rings

73. Habitual dislocation occurs in connection

1. with damage to the brachial plexus
2. with damage to the tendon of the long head of the biceps
3. **with rupture and weakness of the shoulder joint capsule**
4. with uncorrected traumatic dislocation
5. damage to the humeral head

74. An old shoulder dislocation should be treated

1. conservatively (trying to correct)
2. on the outlet bus
3. using skeletal traction
4. **promptly (open or hardware method)**
5. skeletal traction

75. The treatment of choice for the treatment of upper limb gunshot fractures would be

1. intramedullary osteosynthesis
2. skeletal traction
3. bone osteosynthesis
4. **extrafocal osteosynthesis using an apparatus**
5. plaster cast

76. With perilunar dislocation, the following wrist bones are dislocated

1. lunate bone in relation to the wrist joint
2. **capitate bone in relation to the lunate**
3. lunate and capitate bones in relation to the wrist joint
4. navicular and capitate bones in relation to the multifaceted

5. capitate bone in relation to the pisiform and wrist joint

77. With a dislocation of the lunate bone, the following bones of the wrist are dislocated

1. **lunate bone in relation to the wrist joint**
2. capitate bone in relation to the lunate
3. lunate and capitate bones in relation to the wrist joint
4. capitate and uncinate bones in relation to the lunate
5. lunate bone in relation to the scaphoid

78. With a dislocation of the scaphoid, the following clinical sign does not occur

1. 1st toe is in abduction position
2. the brush is set aside to the ulnar side
3. a painful protrusion is felt in the area of the anatomical snuffbox
4. **the hand is in the palmar flexion position**
5. all of the above

79. It is not used in the treatment of dislocations of the wrist bones.

1. simultaneous reduction
2. operative (bloody) reduction of dislocation
3. reduction of dislocation with extrafocal fixation device
4. **skeletal traction for the nail phalanges**
5. blockade, reduction and immobilization.

80. With a complete isolated dislocation of the 1st toe, all of the above is observed, except

1. the main phalanx of the 1st toe is at right angles,

   open to the rear of the metacarpal bone

2. **the nail phalanx is at right angles to the main**

   at an angle, open to the rear

3. shortening of the 1st finger
4. a protrusion corresponding to the head of the 1st metacarpal bone is palpable on the palmar surface
5. movements are limited, sharp pains, deformation.

81. It is not used in the treatment of dislocation of the phalanges of the fingers

1. conservative reduction and plaster immobilization
2. skeletal traction for the nail phalanx
3. operative (bloody) reduction and fixation with a wire transarticularly
4. **reduction and fixation on the apparatus of A.I. Ashkinazi**
5. blockade, reduction

82. For damage to the tendon of the deep flexor of the finger is not typical

1. localization and type of wound
2. **active flexion of the finger in the metacarpophalangeal joint**
3. lack of active flexion of the nail phalanx of the finger
4. lack of muscle tone during passive extension of the finger
5. correct 2-4

83. Contraindication to the imposition of a primary tendon suture deep flexor tendon is all of the above, except

1. the presence of clear signs of acute inflammation in the area of the wound on the finger
2. if the victim has severe concomitant damage to internal organs
3. multiple fractures of the bones of the hand and fingers, requiring special treatment
4. **the presence of damage to the tendons of several fingers**
5. all of the above

84. The primary tendon suture is called a suture

1. on the tendon within the first hour after injury
2. within the first 24 hours after damage
3. **during the first 7 days after injury**
4. within the first 3 days after injury
5. within 14 days after injury

85. The most rational type of surgery for congenital muscle torticollis

1. myotomy of the legs of the sternocleidomastoid muscle
2. **Zatsepin operation**
3. operation on Hagen - Thorn
4. myotomy of the legs of the sternocleidomastoid muscle + its alloplasty
5. ectomy of the legs of the sternocleidomastoid muscle

86. Postoperative immobilization for congenital muscle torticollis

1. does not apply
2. **plaster collar**
3. Shants collar
4. collar from the rug
5. gypsum bandage

87. Immobilization after surgical treatment of congenital muscle torticollis is

1. 2 weeks
2. **2 months**
3. 4 months
4. 3 months
5. 6 months

88. The etiological factor of congenital hip dislocation (dysplasia) is

1. inflammatory process
2. traumatic factor
3. **dysplasia**
4. incorrect articulation of the fetus in the womb
5. congenital injury

89. The most common congenital dislocation of the hip (dysplasia) is

1. **in females**
2. in males
3. equally often without much difference
4. all of the above
5. only 2 and 3

90. The most common

1. **left-sided dislocation**
2. right-sided dislocation
3. bilateral dislocation
4. dysplasias
5. clubfoot

91. According to the degree of dysplasia of the femoral head in relation to the glenoid cavity , all the listed forms are possible, except

1. preluxation
2. subluxation
3. dislocation
4. **dysplasias**
5. all of the above

92. The leading symptom of hip dysplasia in the first months of a child's life is

1. limb shortening
2. asymmetry of skin folds
3. click symptom
4. **limiting hip abduction**
5. outward rotation of the foot

93. X-ray picture of hip dysplasia in the first months of a child's life

1. **late appearance of the nucleus of ossification of the head**
2. changes in the values of h and d (decrease, increase, no change)
3. the ratio of the hip shaft to the Ombredan line

(a line runs through the diaphysis of the thigh, inward, outward from it)

4. Viberg angle change
5. all of the above

94. Dysplasia of the hip joint is most accurately detected by the X-ray scheme developed

1. S.A. Reinberg
2. Radulescu
3. **Hilgenreiner**
4. Ombredan
5. Gunther

95. Treatment of hip dysplasia begins

1. **from birth**
2. at the age of 1 month
3. at the age of 1-2 months
4. aged 3 months and older
5. from 3 years old

96. The most appropriate treatment for hip dysplasia in the early period is

1. conservative
2. plaster cast
3. functional bus
4. operational
5. skeletal traction

97. Clinical symptomatology of congenital hip dislocation in children over 2 years old includes

1. lameness
2. limb shortening
3. positive Trendelenburg symptom
4. all of the above
5. only 3

98. After two years of age, with various forms of hip dysplasia , it is most advisable to use

1. plaster cast
2. traction
3. functional bus
4. **surgical treatment (extra-articular or intra-articular interventions)**
5. Exercise therapy and massage

99. With conservative treatment of patients with dysplasia (dislocation) of the hip joint, the greatest complications are given by

1. Lorentz method
2. **nonfunctional method**
3. functional method
4. compression-distraction method
5. skeletal traction

100 . In conservative treatment of dysplasia (dislocation) of the hip joint , it is most often encountered as a complication

1. **aseptic necrosis of the femoral head**
2. sciatic nerve paresis
3. joint stiffness and ankylosis
4. all of the above
5. contracture

101. Of the methods of therapeutic influence in the conservative treatment of congenital dislocation of the hip are used

1. spa treatment
2. physiotherapy
3. **physiotherapy**
4. massage
5. mud therapy

102. Surgical methods for the treatment of congenital hip dislocation are divided

1. for intra-articular and extra-articular
2. on the pelvic bones
3. on the proximal thigh
4. in combination with joint arthroplasty
5. on the distal thigh

103. Complications after intra-articular surgery for congenital hip dislocation are

1. relaxation
2. **aseptic necrosis of the femoral head**
3. ankylosis
4. contractures
5. amyotrophy

104. After removing the plaster cast after surgical treatment of congenital dislocation of the hip, apply

1. **passive exercise**
2. active physical exercise
3. mud therapy
4. water treatments
5. massage

105. The load on the operative limb with congenital dislocation of the hip is allowed

1. **after 1 year**
2. in 3 months
3. in 6 months
4. 2 months later
5. after 8 months

106. What is called acute osteomyelitis?

1. purulent inflammation of the fascial spaces of the limbs;
2. purulent inflammation of the joint capsule;
3. tuberculous lesion of the vertebrae;
4. **purulent inflammation of the bone marrow;**
5. purulent inflammation of the spinal cord;

107. The early symptoms of acute hematogenous osteomyelitis include everything except:

1. limb pain;
2. general malaise;
3. high temperature;
4. **phlegmon of the subcutaneous tissue.**
5. local hyperemia, hyperthermia;

108. One of the measures for the successful treatment of acute hematogenous osteomyelitis is:

1. limb massage;
2. active movements in the joints of the limb;
3. skeletal traction;
4. immobilization of a limb with a plaster cast;
5. **antibiotic therapy;**

109. What operation is not performed early in acute osteomyelitis?

1. opening of phlegmon;
2. trepanation of the bone marrow cavity;
3. sequestrectomy;
4. **bone grafting.**
5. opening of the fistulous wound;

110. What therapeutic measure is contraindicated in the early stage of hematogenous osteomyelitis?

1. **massage, physiotherapy exercises;**
2. the introduction of antibiotics;
3. blood transfusion;
4. the introduction of vitamins;
5. sequestrectomy;

111. What complication is not typical for acute hematogenous osteomyelitis?

1. pathological fracture;
2. **gangrene of the limb;**
3. sepsis;
4. subperiosteal abscess;
5. bone defect

112. For filling the sequestral cavity in chronic osteomyelitis, the following is not used:

1. cartilage;
2. **subcutaneous fatty tissue;**
3. spongy bone mass;
4. muscle;
5. fascia;

113. The causative agents of surgical sepsis do not include:

1. colibacillus;
2. hemolytic streptococcus;
3. staphylococcus aureus;
4. **Proteus;**
5. Pseudomonas aeruginosa;

114. The source of surgical sepsis can be anything except:

1. deep burn;
2. **closed fracture;**
3. carbuncle of the face;
4. peritonitis.
5. boil;

115. What is wrong here if we talk about the clinical classification of sepsis?

1. spicy;
2. fulminant;
3. **postoperative;**
4. subacute.
5. chronic;

116. What treatment measures cannot be recommended for sepsis?

1. opening of a purulent focus;
2. the introduction of antibiotics;
3. **limiting the introduction of fluids;**
4. blood transfusion;
5. anti-inflammatory therapy;

117. Which of the above contributes to the development of sepsis?

1. **diabetes;**
2. hypertonic disease;
3. bronchial asthma;
4. cardiosclerosis.
5. neurogenic bladder;

118. What is most important in the treatment of sepsis?

1. strict bed rest;
2. careful collection of anamnesis;

3. treatment of concomitant disease;
4. **elimination of the primary focus;**

5. gastric lavage;

119. What is less typical for sepsis?

1. tachycardia;
2. leukocytosis;
3. **anuria;**
4. increased body temperature;
5. increased ESR

120. Complications of sepsis do not include:

1. pneumonia;
2. bedsores;
3. **thromboembolism;**
4. cachexia;
5. death;

6.2 EVALUATION FUNDS

to monitor the progress of residents in the specialty "Traumatologist, orthopedist"

Forms of control

- interview;
- solving situational tasks;
- assessment of practical skills;
- preparation and defense of the abstract.

Evaluation tools

1. In case of damage to the upper cervical spinal cord at the level (C I-IV), the following develops:

1. flaccid paralysis of the upper limbs;
2. flaccid paralysis of the upper limbs, spastic paralysis of the lower limbs;
3. **spastic tetraplegia, breathing disorder, blood circulation;**
4. spastic paraplegia;
5. paresis of the lower extremities;

2. With damage to the lower cervical spinal cord (C IV-VII) develops:

1. spastic tetraplegia;
2. **flaccid paralysis of the upper, spastic paralysis of the lower extremities;**
3. spastic upper paraplegia;
4. flaccid lower paraplegia;

5. tonic-clonic seizures;

3. In case of damage to the thoracic spinal cord, the following develops:

1. spastic tetraplegia;
2. flaccid paralysis of the lower extremities;
3. **spastic lower paraplegia, paresthesia;**
4. Horner's triad (ptosis, miosis, enophthalmos);
5. paraplegia, hyperesthesia of the lower extremities;

4. When the spinal cord is damaged at the Th X-XII and LI levels, the following develops:

1. **peripheral flaccid paralysis of the lower extremities, pelvic disorders;**
2. spastic tetraplegia, pelvic disorders;
3. spastic paralysis of the lower extremities, paresthesia;
4. girdle radicular pain;
5. increased tendon reflexes;

5. Transportation of patients with spinal injuries is carried out:

1. **on a hard, flat surface in a prone position;**
2. on a chair after immobilization with tires;
3. on a stretcher in a comfortable position for the patient;
4. in the "frog" position;
5. lying on the Beler's tire;

Problem 1

A 5-year-old girl came to the polyclinic with complaints of deformity of both feet. Ill since childhood. She has not been treated anywhere. She was born on time, full-term. At 3 months of age the parents went to the clinic. The doctors said when she went to school we would treat.

Objectively: walks over the feet. On the back of the feet there are corns, the heels are supinated, the Adams groove is pronounced on both sides. Movement in the ankle joints on both sides is preserved. The movement and sensitivity of the fingers are preserved.

Questions:

1. What is your diagnosis?
2. Treatment plan.

Sample answer. 1. Congenital bilateral clubfoot. 2. Surgical treatment.

Task 2

An ambulance brigade delivered a motorcyclist from the street to the traumatology department. He was hit by a car. He didn't lose consciousness. He is sober.

Objectively: there is no immobilization, the left lower leg is deformed, edematous. The movement and sensitivity of the fingers are preserved, the pulsation is preserved. Crunch in the lower leg. There are no wounds on the lower leg.

Questions:

1. What is your diagnosis?
2. What has not been done by the ambulance crew?

Sample answer. 1. Closed fracture s / 3 tibia. 2. The limb was not immobilized with a splint.

Problem 3

Patient D., 25 years old, builder. When falling from a height, the victim twisted his right leg, felt a crackling and sharp pain in the ankle joint. He could not stand on the injured leg. He entered the traumatology clinic 16 hours after the injury.

Objectively: the general condition is satisfactory, the right foot is deformed in the ankle joint, displaced to the outside. The area of the joint is severely swollen (edema), a crunch in the area of the inner ankle is palpable, and local tenderness is slightly higher than the outer ankle.

Questions:

1. What is your diagnosis?
2. What kind of assistance will you provide to the victim?
3. What method of treatment for this injury should be carried out?

Sample answer. 1. Closed fracture of the inner ankle with subluxation of the foot. 2. Blockade of the fracture site. 3. Surgical treatment, osteosynthesis of the inner ankle with an extra-bone plate and screws.

Evaluation criteria

Criteria for evaluating an interview:

"Excellent" - a comprehensive, systematic and deep knowledge of educational material, basic and additional literature, the relationship of the basic concepts of the discipline in their meaning for the acquired profession. The manifestation of creativity in the understanding, presentation and use of educational and program material.

"Good" - complete knowledge of the educational material, the main recommended for the lesson. The student shows the systemic nature of knowledge in the discipline and is capable of independent replenishment and updating in the course of further educational work and professional activity.

"Satisfactory" - knowledge of the educational material in the amount necessary for the further development of the discipline, familiar with the main literature recommended for the lesson. The ordinator admits errors, but has the necessary knowledge to eliminate them under the guidance of a teacher.

"Unsatisfactory" - significant gaps in the knowledge of the basic educational material are revealed, fundamental mistakes are made when answering questions.

Evaluation criteria for solving a situational problem:

Excellent - the clinical resident makes the correct diagnosis, taking into account the accepted classification, correctly answers questions using lecture material, textbooks and additional literature.

Good - the clinical resident makes the correct diagnosis, but makes inaccuracies in its justification and insignificant errors in answering questions.

Satisfactory - The clinical resident is oriented in the disease, but cannot make a diagnosis according to the classification. Makes significant errors in answering questions, demonstrating superficial knowledge of the subject.
Unsatisfactory - The clinical resident is unable to formulate a diagnosis or misdiagnoses. Cannot answer most of the problem questions and additional questions correctly.

Criteria for assessing the development of practical skills and abilities
Excellent - Clinical Resident performs all suggested skills correctly and interprets them correctly.
Good - the clinical resident basically performs the proposed skills correctly, interprets them and can independently correct the individual errors identified by the teacher.
Satisfactory - the clinical resident is guided in the main task by practical skills, but makes a number of significant mistakes, which he corrects with the help of the teacher.
Unsatisfactory - the clinical resident did not cope with the proposed task, cannot correctly interpret his actions and does not cope with the additional task.

Criteria for evaluating the completed essay, literary review, summary of the conversation.
"Excellent" - the material is presented logically correctly in an accessible form with clarity (presentation, photo). When writing the work, modern literary sources were used (more than 5, including monographs and periodicals).
"Good" - the material is presented quite fully; in the preparation of the work, periodicals of the old years of issue and the Internet were used.
"Satisfactory" - the topic is poorly disclosed, one-sided. In preparing the work, only the Internet and / or 1-2 periodicals were used.
"Unsatisfactory" - the assigned abstract (conversation) has not been completed or prepared carelessly, the topic has not been disclosed. In preparing the work, only the Internet was used.

6.3 EVALUATION FUNDS
for intermediate certification of residents
in the specialty "Doctor-surgeon"

Forms of control

- oral interview;
- solving situational tasks.
-Practical skills

Evaluation tools

Exam ticket options:

1. Highlight the movements in the knee joint in which the menisci move with the hip:

1. extension;
2. **rotation;**
3. flexion;
4. external rotation;
5. internal rotation4

2. Note the formation of the tibia, to which the patellar ligament is attached :

1. the articular edge of the external condyle;
2. the articular edge of the inner condyle;
3. **tuberosity;**
4. calcaneal tubercle;
5. occipital protuberance;

3. Specify the place of attachment of the lateral lateral ligament of the knee joint:

1. external meniscus;
2. **fibula head;**
3. transverse ligament;
4. tuberosity;
5. patella;

4. Specify the position of the leg at which the pain in the knee joint with its hemarthrosis is the least:

1. full extension;
2. bending at right angles;
3. **slight flexion;**
4. maximum flexion;

5.small abduction;

5. Specify the injuries in which there is an expansion of the lateral joint space of the knee joint:

1. rupture of the posterior cruciate ligament;
2. rupture of the external lateral ligament:
3. **fracture of the inner silk of the tibia;**
4. rupture of the anterior cruciate ligament;
5. fracture of the fibula;

Situational task

Problem 1

A 13-year-old child was admitted to the department of pediatric orthopedics - a boy, very mobile. No complaints.

Objectively: walks with a limp on the right leg, there is atrophy of the muscles of the thighs and lower legs, a relative shortening of the right lower limb by 2 cm.

On the R-gram : fragmentation of the femoral head.

Questions:

1. What is your diagnosis?
2. The principle of treatment.

Task 2

The parents of the child turned to the department of pediatric orthopedics, age 1 year (girl) - was born on time, full-term, does not walk.

Objectively: lordosis is noted while standing, when trying to walk holding the hand, limps, swaying to the sides. The relative length of the limbs is the same on both sides.

Questions:

1. What is your presumed diagnosis?
2. Examination plan and further treatment?

Problem 3

Patient D., 50 years old, was walking, fell on her right arm.

Objectively: in the lower third of the radial surface, the right forearm is deformed by an angle open to the rear. The movement and sensitivity of the fingers are preserved. The edema is insignificant. Movement in the elbow joint is preserved.

Questions:

1. What is your presumptive diagnosis?
2. Examination and treatment plan?
3. What kind of pain relief?
4. The immobilization level of the dressing?

Evaluation criteria

Criteria for evaluating an oral interview:

"Excellent" - a comprehensive, systematic and deep knowledge of educational material, basic and additional literature, the relationship of the basic concepts of the discipline in their meaning for the acquired profession. The manifestation of creativity in the understanding, presentation and use of educational and program material.

"Good" - complete knowledge of the educational material, the main recommended for the lesson. The student shows the systemic nature of knowledge in the discipline and is capable of independent replenishment and updating in the course of further educational work and professional activity.

"Satisfactory" - knowledge of the educational material in the amount necessary for the further development of the discipline, familiar with the main literature recommended for the lesson. The student makes mistakes, but has the necessary knowledge to eliminate them under the guidance of the teacher.

"Unsatisfactory" - significant gaps in the knowledge of the basic educational material are revealed, fundamental mistakes are made when answering questions.

Evaluation criteria for solving a situational problem:

Excellent - the clinical resident makes the correct diagnosis, taking into account the accepted classification, correctly answers questions using lecture material, textbooks and additional literature.

Good - the clinical resident makes the correct diagnosis, but makes inaccuracies in its justification and insignificant errors in answering questions.

Satisfactory - The clinical resident is oriented in the disease, but cannot make a diagnosis according to the classification. Makes significant errors in answering questions, demonstrating superficial knowledge of the subject.

Unsatisfactory - The clinical resident is unable to formulate a diagnosis or misdiagnoses. Cannot answer most of the problem questions and additional questions correctly.

6.4 VALUATION FUNDS

for the final state certification of residents

Forms of control

- test control;
- oral interview;
- solving situational tasks.
-Practical skills

Evaluation tools

Traumatology, orthopedics (3rd year of study) "-500

1. 271. The radio-ulnar angle is normally equal to:

1. 5 °
2. 10 °
3. 20 °
4. **30 °**
5. 40 °

2. There are the following types of dislocations:

1. fresh
2. stale
3. congenital
4. old
5. **all listed**

3. Dislocation of the acromial end of the clavicle is characterized by:

1. sign of Marx
2. symptom of "triangular pillow"
3. **symptom "keys"**
4. springy movement in the shoulder girdle
5. running symptom

4. Incomplete dislocation of the acromial end of the clavicle occurs:

1. with a complete rupture of the acromioclavicular and clavicular-coracoid ligaments
2. **with rupture of only the acromioclavicular ligament**
3. with rupture of only the coracoclavicular ligament
4. when stretching the clavicular-acromial ligament
5. when stretching the ligaments of the shoulder girdle

5. To clarify the diagnosis of "complete" or "incomplete" dislocation:
the acromial end of the clavicle requires an x-ray

1. shoulder girdle, in the supine position
2. shoulder girdle, in the position of the patient standing
3. **both shoulder girdles, standing, with a load in hand from the damaged side**
4. both shoulder girdles in the patient's "lying" position
5. shoulder pads, in a sitting position

6. A directed dislocation of the clavicle is considered chronic through:

1. 2 hours
2. 1 day
3. 5 days
4. **3-4 weeks**
5. **4-5 weeks**

7. For chronic complete dislocation of the clavicle in the acromioclavicular joint, all of the above is characteristic, except:

1. protrusion of the acromial end of the clavicle up
2. abduction restrictions
3. pain in the shoulder girdle when moving with a load
4. **rapid fatigability of the upper limb on the side of injury**
5. key symptom

8. Surgical treatment of chronic dislocation of the acromial end of the clavicle still possible through:

1. 1 year
2. 6 months
3. **3 months**
4. 2 years
5. 5 months

9. Duration of immobilization of the upper limb after surgical reduction and restoration of ligaments for complete dislocation of the clavicle is:

1. 2 weeks
2. **4-5 weeks**
3. 8 weeks
4. 12 weeks
5. 6 weeks

10. The most common sternal dislocations of the clavicle are:

1. suprasternal
2. **presternal**
3. retrosternal
4. bilateral

5. under the sternum

List of practical skills:

1 Examine patients with injuries and diseases of the musculoskeletal system
2 Determine the presence of a fracture or dislocation based on clinical signs
3 To diagnose typical congenital (congenital dislocation of the hip, clubfoot, torticollis, syndactyly) and acquired (scoliosis, deforming arthrosis, osteochondrosis, deformity of the feet) orthopedic diseases
4 Anesthetize the fracture site of the diaphysis of long tubular bones
5 For open fractures, temporarily stop bleeding (including the imposition of a hemostatic tourniquet, clamp, ligature, pressure bandage)
6 Carry out transport immobilization in case of damage to the musculoskeletal system
7 Apply a typical plaster cast splint over the distal upper and lower extremities.

Exam ticket options:

Ticket number 1

1) Lower limb anatomy. What is the cervico-shaft angle?
2) Habitual dislocation of the shoulder. Diagnostics, treatment.
3) The fundamental difference between fractures of the femoral neck and trochanter.

Ticket number 2

1) Congenital clubfoot. Clinic, diagnostics, treatment.
2) What is transport immobilization? Name its types.
3) Displacement of the clavicle fragments and their causes.

Ticket number 3

1) Dislocations of the forearm, types. Diagnostics, treatment.
2) Fracture of the patella. Indications for surgical treatment.
3) torticollis. Classification. Diagnostics and treatment.

Evaluation criteria

Criteria for assessing test control of knowledge of residents:
Of the 100 proposed tasks in the test form, the clinical intern gave the correct answers:
"Excellent" - 90-100 tasks
"Good" - 76-89 tasks
"Satisfactory" - 58-75 tasks
"Unsatisfactory" - 58 or less

Criteria for evaluating the implementation of a practical skill:
"Excellent" - the goal of the skill is correctly defined, the work is completed in full, observing the required sequence of actions. The necessary equipment was independently and rationally selected and prepared, all actions were carried out in conditions and modes that ensure the best results. Observations are scientifically competently, logically described and conclusions are

formed. In the presented fragment of the medical document, all the entries were made correctly and accurately, the results were interpreted. Demonstrated organizational and labor skills (maintaining a clean workplace and order on the table, economical use of consumables). The skill is carried out according to the plan, taking into account safety measures and the rules for working with materials and equipment.

"Good" - the resident fulfilled the requirements for the grade "5", but: the algorithm was carried out in conditions that did not provide sufficient efficiency, made two or three mistakes or more than one gross error and one defect, the algorithm was not carried out completely or inaccuracies were made in the description, conclusions made incomplete.

"Satisfactory" - the resident has correctly identified the goal of the skill; the work is performed correctly at least half, however, the volume of the completed part is such that it allows you to obtain the correct results and conclusions on the main, fundamentally important tasks of the work, the selection of equipment, objects, materials, as well as work on the beginning of the algorithm was carried out with the help of a teacher; or in the course of the algorithm, mistakes were made in the description of the results, in the formulation of conclusions. The algorithm was carried out under irrational conditions, which led to obtaining results with a greater error; or during the execution of the documentation, a total of no more than two errors were made that were not of a fundamental nature for this work, but that influenced the result of the execution; the analysis of the results is not performed at all or is performed incorrectly; a gross error was made in the course of the algorithm (in the explanation, in the preparation of the documentation, in the observance of safety rules when working with materials and equipment), which is corrected at the request of the teacher.

"Unsatisfactory" - the goal of the practical skill has not been independently determined: the work is not completed completely, the necessary equipment is not prepared and the volume of the completed part of the work does not allow making correct conclusions; in the course of the algorithm and during the execution of the documentation, in the aggregate, all the shortcomings noted in the requirements for the score "3" were discovered; two (or more) gross mistakes were made in the course of the algorithm, in the explanation, in the design of the work, in the observance of safety rules when working with substances and equipment, which cannot be corrected even at the request of the teacher.

Error classification:
When assessing the knowledge, skills and abilities of residents, all mistakes (gross and not rude) and shortcomings should be taken into account.

The following errors are considered gross:
- ignorance of the definition of basic concepts, laws, rules, basic provisions of the theory, ignorance of formulas, generally accepted symbols for designations of quantities, units of their measurement;
- ignorance of the names of units of measurement;
- inability to highlight the main thing in the answer;
- inability to apply knowledge to solve problems and explain phenomena;
- inability to draw conclusions and generalizations;
- inability to read and interpret the data of laboratory and instrumental examination methods;
- inability to use primary sources, textbooks and reference books;
- violation of safety measures;
- negligent attitude to equipment, devices, materials.

The following errors are considered rude:
- inaccuracy of formulations, definitions, concepts, laws, theories, caused by incomplete coverage of the main features of the defined concept or replacement of 1-2 of these features with secondary ones;

- errors caused by non-observance of the conditions of the methodology, observation, operating conditions of the device, equipment;
- errors in conventions;
- an irrational method of performing a skill or an insufficiently thought-out plan for an oral answer (violation of logic, substitution of certain basic questions with secondary ones);
- irrational methods of working with reference and other literature.

The disadvantages are:
- irrational techniques, execution of algorithms, observations, tasks;
- errors in calculations (arithmetic);
- negligent execution of records;
- spelling and punctuation errors.

Criteria for evaluating the oral examination answer:
"Excellent" - a comprehensive, systematic and deep knowledge of educational material, basic and additional literature, the relationship of the basic concepts of the discipline in their meaning for the acquired profession. The manifestation of creativity in the understanding, presentation and use of educational and program material.
"Good" - complete knowledge of the educational material, the main recommended for the lesson. The resident shows the systemic nature of knowledge in the discipline and is capable of independent replenishment and updating in the course of further educational work and professional activity.
"Satisfactory" - knowledge of the educational material in the amount necessary for the further development of the discipline, familiar with the main literature recommended for the lesson. The ordinator admits errors, but has the necessary knowledge to eliminate them under the guidance of a teacher.
"Unsatisfactory" - significant gaps in the knowledge of the basic educational material are revealed, fundamental mistakes are made when answering questions.

Correspondence table of points and grades during certification

Points	**Traditional grades**
90-100	Great
76-89	Good
58-75	satisfactorily
less than 58	unsatisfactory

Ministry of Health of the Kyrgyz Republic
Kyrgyz State Medical Academy named after I.K. Akhunbaeva
Department of Traumatology Orthopedics and Extreme Surgery

DIARY

resident in the specialty "Traumatology and Orthopedics"
20 ___- 20___ academic year

Bishkek, 2021

Dear resident!

Congratulations on choosing the specialty "traumatologist orthopedist"!

Traumatology orthopedics is an academic and scientific discipline that has its own subject of study, teaching, research in the framework of evidence-based medicine, clinical activity; in addition, it is a clinical specialty focused on the provision of primary health care, as well as specialized, including high-tech, medical and palliative care for diseases of the musculoskeletal system.

Traumatologist-orthopedist treats diseases and injuries of the musculoskeletal system. Diseases and injuries of the musculoskeletal system sharply worsen a person's health and quality of life, lead to disability and can even lead to death. Therefore, the work of a traumatologist and orthopedist is extremely important. Doctors of this specialty work in polyclinics and hospitals and in specialized research centers.

The second and third years of residency training in a traumatologist-orthopedist assumes basic training in basic clinical disciplines in related disciplines.

Practical training is 90% and will take place at clinical sites with the involvement of residents in the provision of emergency care to patients under the supervision of a clinical mentor from among experienced practitioners.

The resident's diary will help you to make the most of your residency. The diary clearly sets out the goals to be achieved by the resident by the end of the residency training as a traumatologist-orthopedist under the guidance of a clinical mentor.

The goals are grouped into 4 lists for each block:

1. List of practical skills
2. List of common symptoms and syndromes
3. Emergency checklist
4. List of distance (online) lectures that the resident should listen to

The journal provides sample assessment forms to help the Resident and Clinical Trainer assess progress towards the Resident's training goals.

Being a doctor is a lot of work!

We wish you success in mastering all the secrets of the medical profession!

Ministry of Health of the Kyrgyz Republic

Resident's diary
in specialty:
"Traumatology and Orthopedics"
(second and third years of residency)

FULL NAME. resident
_____

Phone, email _____

What university and when did I graduate
_____

Date of enrollment in residency
_____

Educational / scientific organization
_____

Department
_____

Responsible for the residents from the department:

Full name, position
_____

Phone, email _____

Clinical base _____

Responsible for residents from the clinical base:

Full name, position
_____

Phone, email _____

Resident's Academic Conduct and Ethics Policy
in the specialty "Traumatology and orthopedics "

Resident's working day plan	
Type of activity	Time
Participation in the morning medical conference	8 ^{00} - 8 ^{30}
Supervision / reception of patients, filling out the medical history	8 ^{30} - 11 ^{45}
Discussion of a clinical case on the topic	11 ^{45} -12 ^{15}
Seminar lesson (once a week)	12 ^{00} - 13 ^{30}
Monitoring, assessment of the performance of manipulations / skills	13 ^{30} - 14 ^{00} (once a week) In the remaining days within 12 ^{00} -14 ^{00} clinical practice, depending on the cycle

1. The resident must work full time in the department from 8.00 to 14.00.
2. The resident must be present:
   2.1. At morning department conferences.
   2.2. At pathological conferences.
   2.3. At scientific and practical conferences.
   2.4. At clinical conferences.
   2.5. At seminars with residents, according to the schedule of the department (once a week).
   2.6. Circumstances of the head of the department, head of the department, consultations on difficult patients.
3. Visit the educational events of the department:
   3.1. Lectures according to the schedule (once a week).
   3.2. Optional disciplines in accordance with the residency curriculum.
4. The resident must:
   4.1. Continuously manage up to 10 patients in the hospital, admit up to 12 patients per day in the admission department of the hospital.
   4.2 In their clinical work in the department, be subordinate and supervised by the head of the department in which they work, and the clinical mentor.
   4.3 Perform two daily shifts per month. On absenteeism, it is necessary to inform the doctors on duty and the department teacher responsible for working with residents. When changing shifts from one agreed date to another, notify the doctors on duty about this.
   Residents with children under 3 years old or due to illness (documented) that does not allow them to be on duty are released.
   4.4 Report new patients to the clinical advisor on the day they are admitted.
   4.5. Prepare medical documentation in a timely manner and in accordance with the requirements.
   4.6. Preparation of discharge epicrisis for a planned discharge the day before (an epicrisis must be signed by the head of the department and by the clinical mentor).

4.7 Patients with severe and unclear diseases must be discussed with a clinical mentor and consult with the head of the department on an unscheduled basis.
4.8. Observe the principles of medical ethics and deontology.
5. During training, each resident must:
5.1. Prepare a clinical analysis of the patient.
5.2. Submit the main materials of scientific conferences, symposia, etc. after visiting them.
5.3. Participate in the preparation of scientific and educational activities of the department (preparation of slides, patient report, assistance in creating teaching materials).

6. During the training period, each resident is obliged:
6.1. Pass exams and credits in accordance with the training program.
6.2. Be certified for every six months and every year of study.
6.3. Keep a resident's diary, in accordance with the requirements for them.
6.4. In case of absenteeism, it is necessary to inform the clinical mentor or the head of the department, the department teacher responsible for working with the residents about your absence and its reason.
6.5. If you are absent from work, you must present a certificate of illness or other document explaining the reason for the pass.

Failure to comply with these requirements by residents may lead to non-certification and expulsion from the residency.

Individual plan

of passing the 1st year of residency (basic practical training) in the specialty "Traumatology and orthopedics "

No.	Name of disciplines for SES	Distribution of curriculum time by type of occupation		Distribution of hours by year
		Total labor intensity according to GOS		Weeks
		Credit units / Credits	In hours	
	General clinical disciplines (20%)	**22.4**	**672**	**14**
1	Operative surgery and topographic anatomy	6.4	192	4
2	Radiation diagnostics	6.4	192	4
3	Osteoarticular phthisiology	3.2	96	2
4	Rheumatology	3.2	96	2
5	Bone oncology	3.2	96	2
	Special (professional) discipline (up to 80%)	**51.2**	**1536**	**32**
1	Traumatological reception	12.8	384	8
2	Adult traumatology	22.4	672	14
3	Pediatric traumatology	6.4	192	4
4	Neurotraumatology	3.2	96	2
5	Anesthesiology and	3.2	96	2

	resuscitation			
6	Thoracic-abdominal trauma	3.2	96	2
	Attestation	**3.2**	**96**	**2**
	Total	**76.8**	**2304**	**48**
	Holidays			**4**
	Total	**22.4**	**672**	**52**

Individual plan

of passing the 2nd year of residency (basic practical training) in the specialty "Traumatology and orthopedics "

No.	**Name of disciplines for SES**	**Distribution of curriculum time by type of occupation**		**Distribution of hours by year**
		Total labor intensity according to GOS		**Weeks**
		Credit units / Credits	**In hours**	
	General clinical disciplines (20%)	**12.8**	**384**	**8**
5	Bone-purulent surgery	6.4	192	4
6	Combustiology	6.4	192	4
	Special (professional) discipline (80%)	**60.8**	**1724**	**38**
1	Traumatological reception	22.4	672	14
2	Adult traumatology	25.6	768	16
4	Anesthesiology and resuscitation	6.4	192	4
5	Neurotraumatology	6.4	192	4
	Attestation	**3.2**	**96**	**2**
	Total	**76.8**	**2304**	**48**
	Holidays			**4**
	Total			**52**

Individual plan

of passing the 3rd year of residency (basic practical training) in the specialty " Traumatologist-orthopedist "

No.	Name of disciplines for SES	Distribution of curriculum time by type of occupation		Distribution of hours by year
		Total labor intensity according to GOS		Weeks
		Credit units / Credits	In hours	
	Special (professional) discipline	**59.2**	**1776**	**37**
1	Adult Orthopedics	16.0	480	10
2	Pediatric Orthopedics	14.4	432	9
3	Joint pathology	14.4	432	9
4	Spine pathology	14.4	432	9
	Optional disciplines (humanitarian and general education block) out of 4 choose 3	**14.4**	**432**	**9**
1	Istanbul Protocol (August 9, 1999)	4.8	144	3
2	Ministry of Emergency Situations	4.8	144	3
3	pedagogy and psychology	4.8	144	3
4	Public health			
	Attestation	**3.2**	**96**	**2**
	Total	**76.8**	**2304**	**48**
	Holidays			**4**
	Total			**52**

Special (professional) discipline (basic traumatology and orthopedics)

Duration - 69 weeks

List 1.
Medical manipulations and practical skills of the
resident in the specialty " Traumatologist-orthopedist " according to the catalog of competence

- primary surgical treatment of wounds;
- the imposition of a vascular suture;
- drainage of the pleural, abdominal and mediastinal cavities;
- removal of foreign bodies from soft tissues:
- opening of abscesses: abscess, phlegmon, paraproctitis, panaritium, etc.;
- treatment of thermal burns of all degrees;
- stopping bleeding in case of damage to the great vessels;
- puncture of the pleural cavity, pericardium, abdominal cavity and large joints;
- reposition of fractures, transport immobilization in case of injuries of the limbs and spine;
- reduction of bone dislocations;
- the imposition of plaster casts for different localization of fractures and other injuries.

List 2.

Qualification requirements for a traumatologist-orthopedist.
In accordance with the educational requirements for the specialty "Traumatology and Orthopedics", a specialist who has completed training in clinical residency must have the following competencies.

1. A traumatologist-orthopedist should know:

- general issues of organizing trauma care for the population, the work of medical institutions;
- normative documents regulating the activities of a traumatologist;
- general, functional, instrumental and other special examination methods;
- issues of asepsis and antiseptics in surgery; principles, techniques and methods of pain relief in surgery, issues of intensive care and resuscitation in adults and children;
- the basics of pharmacotherapy, including general and local use of antibiotics, hormone therapy; fundamentals of immunobiology, microbiology; fundamentals of radiology and radiology;
- clinical symptomatology of the main surgical diseases in adults and children, their prevention, diagnosis and treatment; clinical symptoms of "borderline" diseases in a surgical clinic (urology, obstetrics and gynecology, pediatrics, infectious diseases);
- principles of preparing patients (adults and children) for surgery and postoperative management;
- issues of temporary and permanent disability, clinical examination and rehabilitation of surgical patients;
- the use of physiotherapy, physiotherapy exercises;
- indications and contraindications for spa treatment;

labor protection rules when working with equipment and surgical instruments;
the basics of rational nutrition, the principles of diet therapy in surgical patients during preoperative preparation and in the postoperative period;
- equipping the operating rooms of intensive care; surgical instruments used in various surgical operations;

principles of organizing and conducting medical examination of the population; economic issues of the surgical service;

2. A traumatologist-orthopedist should be able to:

- obtain information about the disease, to apply objective methods of examining the patient, to identify general and specific signs of a surgical disease, especially in cases requiring emergency care or intensive therapy;

- assess the severity of the patient's condition and take the necessary measures to remove the patient from this condition, determine the volume and sequence of resuscitation measures;

- provide the necessary urgent first aid (artificial respiration, heart massage, immobilization of a limb in case of fracture, stopping bleeding, dressing and tamponade of the wound, gastric lavage in case of poisoning, urgent tracheostomy in case of asphyxiation);

- determine the need for special research methods (laboratory, radiological, functional, endoscopic, etc.), organize their implementation and give the correct interpretation of the results;

- determine the indications for hospitalization, organize it in accordance with the patient's condition;

- carry out differential diagnostics of the main injuries and diseases of the musculoskeletal system diseases in adults and children, to substantiate the clinical diagnosis;

- substantiate the scheme, plan and tactics of patient management, indications and contraindications for surgery;

- develop a plan for preparing the patient for an emergency or planned surgery, to determine the degree of homeostasis disorders, to prepare all functional systems of the patient's body for surgery;

- determine the blood group, conduct compatibility tests and perform intravenous or intra-arterial blood transfusion, identify possible transfusion reactions and complications and fight them;

- substantiate the most expedient tactics of surgery in case of pathology and perform it in the required volume;

- substantiate the method of pain relief and, if necessary, perform it;

- develop a scheme of postoperative patient management and prevention of postoperative complications;

- resolve the issue of the patient's ability to work;

- issue all the necessary medical documentation provided by the legislation on healthcare;

- carry out sanitary and educational work with the population and the sick;

- draw up a report on their work and analyze its effectiveness.

3. A traumatologist-orthopedist must know:

- primary surgical treatment of wounds;
- the imposition of a vascular suture;
- drainage of the pleural, abdominal and mediastinal cavities;
- removal of foreign bodies from soft tissues:
- opening of abscesses: abscess, phlegmon, paraproctitis, panaritium, etc.;
- treatment of thermal burns of all degrees;
- stopping bleeding in case of damage to the great vessels;
- puncture of the pleural cavity, pericardium, abdominal cavity and large joints;
- reposition of fractures, transport immobilization in case of injuries of the limbs and spine;
- reduction of bone dislocations;
- the imposition of plaster casts for different localization of fractures and other injuries.

Emergencies in traumatology and orthopedics.

List 3

Practical skills of the resident during the years of study in the specialty "Traumatology and Orthopedics", in which the resident should be able to provide first aid

31. Shock (anaphylactic, toxic, traumatic, hemorrhagic, cardiogenic, hypovolemic, septic, etc.).
32. Fainting. Collapse.
33. Coma (hypoglycemic, diabetic, cerebral, hepatic, unclear etiology, etc.).
34. Acute respiratory failure, apnea.
35. Severe attack of bronchial asthma, broncho-obstructive syndrome in adults.
36. Quincke's edema.
37. Pulmonary embolism.
38. Acute heart failure.
39. Acute disturbances in the rhythm and conduction of the heart.
40. Hypertensive crisis.
41. Unstable angina.
42. Myocardial infarction.
43. Hepatic and renal colic.
44. Bleeding.
45. Acute kidney injury.
46. Acute liver failure.
47. Acute adrenal insufficiency.
48. Lung edema.
49. Swelling of the brain.
50. Convulsive states, status epilepticus.
51. Psychomotor agitation. Panic attack. Acute stress response. Suicide.
52. Chemical and thermal burns, frostbite.
53. Electric shock, lightning, heat and sunstroke.
54. Poisoning, including psychoactive substances.
55. Drowning, strangulation.
56. Thyrotoxic crisis.
57. Preeclampsia, eclampsia.
58. Clinical death.
59. Bites and stings.
60. Acute arterial and venous obstruction.
61. Traumatic eye injuries, incl. foreign bodies.
62.

List 4.

THEMATIC PLAN OF LECTURES AND SEMINARS
in a special discipline for the first year of study

No.	Theme	number of hours
1	The history of the development and organization of traumatological and orthopedic care in the Kyrgyz Republic. Issues of ethics and deontology in orthopedics and traumatology.	2
2	Traumatology and orthopedics as a science of injuries and diseases of the musculoskeletal system. The main methods of treatment of trauma and orthopedic patients	2
3	General and special research methods and basic principles of treatment of traumatological and orthopedic patients.	2
4	Clinical anatomy of the shoulder girdle and upper limbs	2

5	Clinical anatomy of the pelvis and hip	2
6	Clinical anatomy of the lower leg and foot.	2
7	Clinical chest anatomy	2
8	Clinical anatomy of the spine.	2
9	Injuries to the shoulder girdle and upper limb, dislocations and fractures of the clavicle, ribs and scapula. The mechanism of injury. Clinic, diagnosis and treatment.	2
10	Shoulder fractures, fracture classification clinic, diagnosis and treatment.	2
11	Fractures and dislocations of the bones of the forearm. Clinic, diagnostics, treatment.	2
12	Fractures of the bones of the hand. Perilunar dislocation of the hand. Bennett, Roland's fractures. Clinic, diagnostics, treatment.	2
13	Spinal injury. Classification, mechanism of injury. Clinic, diagnosis of injuries of the spine and spinal cord. Conservative treatment of uncomplicated vertebral fractures, indications for surgical treatment. Transportation of patients with spinal injuries.	2
14	Injury to the pelvic bone. Classification of pelvic fractures according to Kaplan, according to AO / ASIF. Mechanism of trauma clinic, diagnosis of pelvic fractures, treatment. Conservative and surgical methods of treatment.	2
15	Lower limb injuries. Fractures of the proximal end of the femur. Femoral neck fractures, trochanteric fractures, injury mechanism classification. Clinic, diagnostics, treatment.	2
16	Diaphyseal hip fractures. Open hip fractures, features. Clinic, diagnostics, treatment. Types of surgical treatment	2
17	Fractures of the distal end of the femur. Fractures of the femoral condyles. Classification mechanism of injury. Clinic, diagnostics, treatment.	
18	Patella fractures, clinical picture, diagnosis, treatment. Clinic, diagnostics, treatment.	2
19	Shin fractures. Classification, fractures of the tibial condyles. Clinic, diagnostics, treatment.	2
20	Diaphyseal fractures of the leg bones. Classification, clinic, diagnosis, treatment.	
21	Fractures of the ankles. Clinic, diagnostics, treatment.	
22	Fractures of the bones of the foot. Classification mechanism of injury, clinic, diagnosis, treatment. Fractures of the bones of the tarsus, metatarsal bones and phalanges of the toes. Clinic, diagnostics, treatment.	2
23	CCMT. Brain concussion. Clinic. Diagnostics. Treatment.	2

24	OTBI. Brain contusion. Clinic. Diagnostics. Treatment.	2
25	Anesthesia, intensive care and resuscitation in trauma patients.	2
26	Traumatic shock. Definition of traumatic shock, classification. Pathogenesis, phases of traumatic shock. Anti-shock treatment at the prehospital stage and in the hospital.	
27	Polytrauma. Multiple, combined, combined injuries. Classification. Symptoms. Complications. Prevention. Treatment principles.	2
28	Injury to the pelvic organs. Damage to the urethra, bladder. Diagnostics, surgeon's tactics. Conservative and surgical methods of treatment.	2
29	Birth injuries of the musculoskeletal system	2
30	Hip dysplasia	2
31	Features of traumatic injuries in children. Childhood injuries. Research methods	2
32	Combined trauma in children. Providing emergency care	2
	TOTAL	64

Thematic plan of seminars
for the training of clinical residents
in the specialty "Traumatology and Orthopedics" in the 2nd year of study

No.	Theme	number of hours
1	Traumatology and orthopedics as a science of injuries and diseases of the musculoskeletal system. The main methods of treatment of trauma and orthopedic patients	2
2	General changes in the body during trauma. Traumatic illness.	2
3	Modern aspects of osteoporosis	2
4	Technologies of modern extramedullary, intramedullary and extrafocal osteosynthesis	2
5	Diagnostics, treatment and prevention of acute traumatological complications (PE, fat embolism, traumatic shock).	2
6	Closed soft tissue injuries: contusion, sprain, rupture, compression. Features of the introduction of trauma patients on an outpatient basis	2
7	Chest damage. Clinic. Treatment and rehabilitation.	2
8	Blunt trauma to the abdomen. Symptoms. Complications. Treatment principles.	2

9	Bleeding. Methods for stopping bleeding. Blood transfusion and blood substitutes.	
10	Damage to muscles, tendons, joint capsules	2
11	Damage to the flexor and extensor tendons of the fingers and toes. Clinic, diagnostics, treatment. Tendon suture technique.	2
12	Damage to the ligamentous apparatus of the knee joint. Damage to the menisci.	2
13	Damage to the ligamentous apparatus of the ankle joint. Achilles tendon injury. Clinic, diagnostics, treatment.	2
14	Diagnosis and treatment of fractures in the elderly	2
15	Bone tissue regeneration.	2
16	Nonunited fractures, false joints.	2
17	Traumatic dislocations of the upper limb. The mechanism of their occurrence. Principles of reduction and treatment.	2
18	Traumatic dislocation of the lower limb. The mechanism of their occurrence. Principles of reduction and treatment.	2
19	Open fractures and surgeon's tactics.	2
20	Prolonged Compression Syndrome. Definition. Etiology, pathogenesis, clinical presentation (classification). Providing assistance at the pre-hospital stage. Inpatient treatment.	2
21	Gunshot wounds. The morphology of the gunshot wound. Classification. PST of a gunshot wound.	2
22	Gunshot fractures. Classification, features of the introduction of patients	2
23	Explosive injuries of the musculoskeletal system.	2
24	Wounds and wound infections. Tetanus. Anaerobic infections	2
25	Felon. Classification. Cutaneous, subcutaneous, subungual, tendon, bone, pandactylitis. Clinic and treatment.	2
26	Necrosis. Classification. Dry and wet necrosis.	2
27	Gangrene. Trophic ulcers.	2
28	Fundamentals of neurotraumatology. Types of traumatic brain injury. Diagnostics and treatment tactics for traumatic brain injury	2
29	Neuritis and neuropathy. Clinic. Diagnostics. Treatment.	2
30	CCMT. Brain concussion. Clinic. Diagnostics. Treatment.	2
31	OTBI. Brain contusion. Clinic. Diagnostics. Treatment.	2
32	Anesthesia, intensive care and resuscitation in trauma patients.	2
33	Traumatic shock. Classification. Pathogenesis, phases of traumatic shock. Inpatient anti-shock treatment.	2

34	Fundamentals and techniques of cardiopulmonary resuscitation in trauma patients (restoration of airway patency, mouth-to-mouth artificial respiration, mechanical ventilation, chest compressions, the concept of defibrillation)	2
35	Electrical trauma. Electric shock mechanisms. First aid for electrical injury.	2
36	Electrical trauma. Determination of the depth of the burn. General and local treatment.	2
37	Rehabilitation of traumatological patients in the conditions of the Research Institute of Balneology and Rehabilitation on an outpatient basis.	2
38	Rehabilitation of traumatological patients in the conditions of the Research Institute of balneology and rehabilitation treatment in inpatient conditions. The main types of physiotherapy, exercise therapy.	2
	TOTAL	76

THEMATIC PLAN OF LECTURES AND SEMINARS
in a special discipline for the third year of study

No.	Theme	Lectures number of hours
1	Organization of orthopedic care in the Kyrgyz Republic. Issues of ethics and deontology in orthopedics.	2
2	Methods of examination of orthopedic patients.	2
3	Principles of treatment for orthopedic patients.	2
4	Old dislocation of the upper limb. Diagnostics and treatment.	2
5	Old dislocations of the lower limb. Diagnostics and treatment.	2
6	Degenerative-dystrophic diseases of the joints. Etiology and pathogenesis. Clinic. Treatment methods depending on the stage of the process and the nature of changes in the joints.	2
7	Arthritis. Secondary osteoarthritis of the joints. Classification, diagnosis, clinic and treatment.	2
8	Ankylosing spondylitis. Classification, diagnosis, clinic and treatment.	2
9	Rheumatoid arthritis. Classification, diagnosis, clinic and treatment.	
10	Endoprosthetics of large joints. Indications. Anesthesia. Methodology and technique.	2
11	Endoprosthetics of the joints of the hand and foot. Indications. Anesthesia. Methodology and technique. Errors, complications and their prevention.	2

12	Errors in arthroplasty of large and small joints, complications and their prevention.	2
13	Posture disorders. Treatment, symptoms, causes, diagnosis, prevention	2
14	Damage to the shoulder joint. Arthroscopic surgery.	2
15	Injuries in the knee joint. Arthroscopic meniscectomy, ACL plastic.	2
16	Deformation of the feet. Flat feet, classification, longitudinal and transverse flat feet. Deviation of the 1st toe outward. The use of conservative and surgical methods of treatment.	2
17	The consequences of injuries (false joints, deformities and shortening of the limbs). Conservative and surgical methods of treatment.	2
18	The consequences of trauma (contractures, ankylosis,). Conservative and surgical methods of treatment.	2
19	Congenital diseases of the musculoskeletal system. Congenital dislocation of the hip. Theories of origin. Dysplasia of the hip joint. Clinic, diagnostics, treatment in children under 1 year old. Clinic, diagnostics, treatment. Conservative and surgical methods of treatment.	2
20	Congenital diseases of the musculoskeletal system. Congenital dislocation of the hip. Dysplasia of the hip joint. Clinic, diagnostics, treatment in children over 1 year old. Clinic, diagnostics, treatment. Conservative and surgical methods of treatment.	2
21	Congenital muscle torticollis. Clinical picture, diagnostics, differential diagnostics with neck deformities (Klippel-Feil disease, accessory cervical rib, high scapula, etc.). conservative and surgical treatment.	2
22	Congenital clubfoot. Clinic, diagnostics, treatment. Congenital deformities of the limbs.	2
23	Clubhand diagnosis, treatment. Syndactyly, polydactyly, ectrodactyly, species.	2
24	Prevention of congenital deformities.	2
25	Osteochondropathy. Etiology and pathogenesis. Osteochondropathy course and clinical manifestation.	2
26	Acquired diseases of the musculoskeletal system. Cerebral palsy. Etiology, pathogenesis. Orthopedic methods of treating cerebral palsy. Methods of conservative and surgical treatment. Rehabilitation measures.	2
27	The clinical picture of flaccid paralysis (consequences of poliomyelitis). Methods of conservative and surgical treatment. Rehabilitation measures.	2
28	Osteochondrosis, disc herniation. Classification, diagnosis, clinic, treatment.	2
29	Spondylitis classification, diagnosis, clinical picture, treatment. Classification, diagnosis, clinic, treatment.	2
30	Spondylolisthesis classification, diagnosis, clinical picture, treatment.	
31	Uncomplicated and complicated spinal injuries. Clinic. Treatment and rehabilitation.	2

32	Complicated spinal injuries. Clinic. Treatment and rehabilitation.	2
33	Spinal anomalies classification, diagnosis, clinical picture, treatment.	2
34	Scoliosis. Etiology. Pathogenesis. Clinic. Prevention. Treatment: conservative, operative.	2
35	Rehabilitation of orthopedic patients in the conditions of the Research Institute of Balneology and Rehabilitation on an outpatient basis.	2
36	Rehabilitation of orthopedic patients in the conditions of the Research Institute of balneology and rehabilitation treatment in inpatient conditions. The main types of physiotherapy, exercise therapy.	2
37	Prosthetics in traumatology and orthopedics.	2
	TOTAL	**74**

THEMATIC PLAN OF LECTURES AND SEMINARS
in general clinical discipline and humanitarian and general education block

No.	**Thematic plan**	**Watch**	Semin. number of hours
1	**Operative surgery and topographic anatomy**		
1.1	Features of the topographic anatomy of the upper limb.	2	2
1.2	Features of the topographic anatomy of the lower limb.	2	2
1.3	Features of the topographic anatomy of the spine	2	2
1.4	Features of the topographic anatomy of the pelvis and pelvic organs	2	2
2	**Radiation diagnostics**		
2.1	X-ray anatomy of the osteoarticular system. age features.	2	2
2.2	Radiation signs of bone damage	2	2
2.3		2	2
2.4		2	2
3	**Osteoarticular phthisiology**		
3.1	Tuberculous spondylitis: detection, diagnosis, clinical manifestations, complications, treatment, prognosis.	2	2
3.2	Tuberculosis of bones and joints: detection, diagnosis, clinical manifestations, complications, differential diagnosis, treatment, prognosis.	2	2
4	**Rheumatology**		
4.1	Topical issues of osteoarthritis of large joints.	2	2

4.2	Topical issues in inflammatory arthropathies of large joints.	2	2
5	**Bone oncology**		
5.1	Principles of diagnosis and treatment of malignant tumors.	2	2
5.2	Bone tumors.	2	2
6	**Bone-purulent surgery**		
6.1	Osteomyelitis. Classification, diagnosis, clinic and treatment.	2	2
6.2	Purulent arthritis, classification, diagnosis, clinical picture and treatment.	2	2
6.3	Anaerobic infection. Diagnostics and surgical treatment.	2	2
6.4	Surgical sepsis. Classification. Theories of the development of sepsis. Diagnostics and treatment.	2	2
7	**Combustiology**		
7.1	Thermal lesions. Burns, classification of burns by the depth of the lesion, determination of the area of the burn (the rule of "palms", "nines"). General and local treatment.		
7.2	Burn disease. Burn shock, classification by severity. Burn toxemia, pathogenesis, burn septic-toxemia. Clinic, diagnostics, treatment.		
7.3	Fundamentals of types of dermal plastics. Surgical treatment of deep burns.		
7.4	Frostbite. Clinical picture and pathogenesis. Treatment.		
Istanbul Protocol (9 August 1999)			
1	Declaration of Human Rights. Human Rights Convention. Constitution of the Kyrgyz Republic. National Center for the Prevention of Torture. Istanbul Protocol.	2	2
2	Torture. Concept. Criminal Code of the Kyrgyz Republic. Types of torture (phalanx, hanging, electric shock, exposure to teeth, strangulation, sexual torture, etc.)	2	2
3	The difference between torture and other types of violence (cruel treatment and cruel punishment, degrading treatment, degrading punishment). The consequences of torture.	2	2
Emergency medicine			
1	Types of disasters. Stages of medical evacuation. The volume of medical care at the stages of evacuation.	2	2
2	Gunshot wounds. The morphology of the gunshot wound. Classification. PST of a gunshot wound.	2	2
3	Prolonged Compression Syndrome. Clinic. Treatment.	2	2

Conferences (including hospital, clinical and anatomical), scientific societies, symposia, clinical

discussions, seminars attended by a resident

No.	the date	Themes	Participation (presence, presentation, patient demonstration, etc.)
1			
2			
3			
etc.			

Residency supervisor (department) (signature) _____

Resident (signature) _____

List of read and refereed literature:

No.	Author	Title of the article, journal, monograph, year of publication, p.
1		
2		
3		
etc.		

Residency supervisor (department) (signature) _____

Resident (signature) _____

Prepared abstracts on the topic:

No.	Abstract topic	Location
1		
2		
3, etc.		

Residency supervisor (department) (signature) _____

Resident (signature) _____

Carrying out tests for sections of the curriculum (according to the test schedule)

No.	Curriculum section	the date of the	Grade	Signature of the head of health care / residency (department)
1				
2				
3, etc.				

Residency supervisor (department) (signature) _____

Resident (signature) _____

Simulation training course (according to the schedule of visiting the Clinical Skills Development and Knowledge Assessment Center)

No.	General professional and special professional skills and abilities	date	Teacher signature
1			
2			
3, etc.			

NIGHT DUTY PROTOCOL DURING PRACTICE

from _____ day of _____ month _____ year
At least two 12 - hour shifts per month in the emergency department.

In the protocol, indicate all the work that had to be done during the period of duty

_____
_____
_____
_____

Resident's Signature _____ Signature of Doctor on Duty _____

Certification in basic theoretical training and simulation course
20____20____ academic year

Period of study	Test control	Simulation course	Interview	The final grade	date

Responsible for residency (department) (signature) _____

Signature of the head of the department _____
signature (full name)

SAFETY INSTRUCTIONS

FULL NAME. resident: _____
_____

_____Signature: _____

Base of practice of medical facilities / department
_____
_____

_____

Date of briefing:

_____

Full name, position of the instructor:

_____
_____

Signature _____ Place of stamp of the medical facility

STANDARDIZED EVALUATION FORMS

How do I use the evaluation forms?

The Clinical Brief Assessment Form (Mini-COF) is used to assess the practitioner's practical skills “at the bedside” or during the patient's appointment. The Mini-COF evaluates the skills of history taking, examination, patient communication, clinical thinking and other general clinical competencies. Clinical thinking is the resident's ability to choose the optimal solution from a

range of possible solutions in each specific clinical situation based on knowledge, skills and experience. During the assessment, the facilitator notes which aspects the resident performed well and which aspects need to be improved and, together with the resident, draws up a plan to improve the resident's skills. This assessment is recommended to be carried out at least 2 times for each rotation block; if possible, it can be carried out more often once every 2 weeks. The resident's diary indicates the final grade for this form.

Direct Follow-up Procedural Skills (DSP). This assessment form is used to assess the ability of residents to perform medical procedures and manipulations included in the list of practical skills of the residents. It is recommended that procedural skills be assessed 1-2 times for each block.

Standardized resident assessment forms

Clinical Evaluation Form (mini-COF)

FULL NAME of the resident _____ ____ year of study

Assessment date_____

FULL NAME and the position of clinical director / clinical mentor

_____
__

Phone and email mail

_____
__

Brief description of the clinical case:

Place of assessment (e.g., in a hospital, FMC, emergency room, emergency room, etc.)

Please rate the Resident on the scale below. Please note that your grade should reflect the level of performance that you reasonably expect from the resident at this stage of the training. Please mark "at a loss to answer" if you have not directly watched this performance.

Very low at this stage of training	**Short** at this stage of training	**Satisfactory** at this stage of training	**Meets expectations** at this stage of training	**Above expectations** at this stage of training	**Much higher** at this stage of training	**I am at a loss to answer** (had no opportunity to observe)

History taking skills

Inspection skills

Communication and consulting skills

Clinical thinking

Patient Attitude / Professional Behavior

Ability to arrange patient admission and examination

General clinical competence

Continued on next page

Based on your observations, please rate the level of general competence demonstrated by the intern:

Clinical thinking		
Rating	**Description**	
Low level at this stage of training	Basic counseling skills, providing incomplete medical history and / or examination results. Poor clinical thinking skills.	□
Performs at the expected level at this stage of learning	Moderate counseling skills, medical history and / or test results are at the required level.	□

	Basic clinical thinking skills are available.	
Performs above expectations at this stage of training	Good counseling skills, providing a thorough history and / or examination results. Skillfully uses clinical thinking skills in a clinical setting.	□
Performs at the level expected from a physician	Excellent and accurate counseling, as a result, providing a complete history and / or research results in a difficult clinical situation. Good clinical thinking skills.	□

What aspects did the resident perform well?

What aspects need to be improved?

Agreed action / plan to improve resident skills

Resident attitude towards patient and education / training process

Resident's signature _____ Supervisor's signature _____

Standardized resident assessment forms

Assessment date

Standardized resident assessment forms

Direct Observation of Procedural Skills (DSP)
Endocrinology
Supervisor / mentor assessment

Clinical base _____

Name of the teacher / curator _____

Position _____

Resident's surname _____

Interventions:

☐ Measurement of the length and circumference of the upper limb ☐ Measurement of the length and circumference of the lower limb ☐ Measurement of blood pressure ☐ Conducting and basic decoding of ECG ☐ Determination of the range of motion ☐ Calculate BMI ☐ Determination of sensitivity (pain, temperature, vibration, tactile) ☐ Definition of reflexes (knee, Achilles)	☐ Transport immobilization and splinting ☐ Blockade fracture site ☐ Puncture of cavities and large joints ☐ Applying a plaster cast ☐ Mounting the skeletal traction system ☐ Technique of paravertebral blockade	☐ Assessment of the general condition of the patient ☐ Determination of absolute signs of a fracture (pain, crepitus, bone crunch, pathological mobility, dysfunction, etc.) ☐ Determining the relative signs of fracture ☐ Examination and palpation of joints, blood vessels ☐ Detection of fingertip motion and sensitivity

1 - a lot needs to be improved **10** - little needs to be improved in relation to educational attainment	What was good?	What needs to be improved?
Preparation for execution ○○○○○○○○○○ 1 2 3 4 5 6 7 8 9 10		
Technical execution ○○○○○○○○○○ 1 2 3 4 5 6 7 8 9 10		
Compliance with asepsis / safety ○○○○○○○○○○ 1 2 3 4 5 6 7 8 9 10		
Clinical Assessment Ability ○○○○○○○○○○ 1 2 3 4 5 6 7 8 9 10		
Organization / efficiency ○○○○○○○○○○ 1 2 3 4 5 6 7 8 9 10		
Professional attitude ○○○○○○○○○○ 1 2 3 4 5 6 7 8 9 10		
General impression ○○○○○○○○○○ 1 2 3 4 5 6 7 8 9 10		

Complexity of intervention ○·weak ○·medium ○·high

Assessment duration (in minutes)

Signature Assessment date

Standardized resident assessment form

REPORT (semi-annual / annual)
clinical resident _____
for the period _____ 20__ year

speciality _____
undergoes residency at the department _____
at the clinical base (which medical institution) _____
marital status _____

1. ***Completed the cycles according to plan (which ones) _____***

2. ***Supervised ____ patients in the department. _____ (medical institution) _____***

3. ***Outpatient admission of patients (how many) _____ (medical facility) _____***

4. ***I mastered practical skills according to the plan (which ones to list):***

_____
_____
_____

5. ***Participation in surgical operations:***
   - ***attended (how many times) _____***
   - ***assisted (how many times) _____***
   - ***independently operated (how many times) _____***
   (what operations) _____

6. ***Night watches in the department (how many times) _____ in the department _____***

7. ***Studied literature (list) _____***
_____

8. ***Participated in conferences, societies (date, place, name)***
_____

9. ***Missing (how many days) _____ (reason) _____***
10. ***He works part-time (by whom) _____ where _____***

Date "_____" 20__

Clinical Resident's Signature _____

Responsible at the department for interns and clinical residents:

(surname) _____ signature

_____

Head of the department: _____

Resident Suggestions for Curriculum Improvement

_____
_____
_____
_____
_____
_____

Date "_____" _____ 20__

Clinical Resident's Signature _____

on the inner cover of the last outer sheet

The final learning outcomes of a graduate who has mastered the residency program in the specialty of a traumatologist-orthopedist must have universal (CC) and professional (PC) competencies, which are described in the catalog of competencies in the specialty "Traumatologist-orthopedist" for the postgraduate level (Chapter 3) ...

Universal competences (CC) "Traumatologist-orthopedist" are characterized by:

- Readiness for abstract thinking, analysis, synthesis (UC-1).
- Willingness to manage a team, tolerantly perceive social, ethnic, confessional and cultural differences (UC-2).
- Willingness to participate in pedagogical activities in programs of secondary and higher medical education or secondary and higher pharmaceutical education, as well as in additional professional programs for persons with secondary vocational or higher education in the manner established by the main executive body performing the functions of developing state policy and health regulation (UC-3).

Professional competences (PC) "Traumatologist-orthopedist" are characterized by:

In preventive activities (PC-1,2,3,4):

- Readiness to implement a set of measures aimed at maintaining and strengthening health and including the formation of a healthy lifestyle, prevention of the onset and (or) spread of diseases, their early diagnosis, identification of the causes and conditions of their occurrence and development, as well as aimed at eliminating harmful effects on human health of the factors of his habitat (PC-1).
- Readiness to carry out preventive medical examinations, clinical examination and dispensary observation of healthy and chronic patients (PC-2).
- Readiness to carry out anti-epidemic measures, organize protection of the population in the centers of especially dangerous infections, in case of deterioration of the radiation situation, natural disasters and other emergencies (PC-3).

- Readiness to use social and hygienic methods for collecting and medical and statistical analysis of information on the health indicators of adults and adolescents (PC-4).

In diagnostic activity (PC-5):

- Readiness to identify pathological conditions, symptoms, syndromes of trauma and orthopedic diseases, nosological forms in patients in accordance with the International Statistical Classification of Diseases and Problems Related to Health.
- Readiness to make a diagnosis based on a diagnostic study in the field of traumatology, orthopedics.
- Readiness for differential diagnosis of diseases based on diagnostic research in the field of traumatology, orthopedics.
- Willingness to analyze the patterns of functioning of individual organs and systems, to use knowledge of the anatomical and physiological foundations, the main methods of clinical and immunological examination and assessment of the functional state of the patient's body for the timely diagnosis of injuries and a group of diseases of the musculoskeletal system.

In medical activities (PC-6, PC-7):

- Willingness to carry out the main therapeutic measures in patients with injuries and orthopedic diseases of one or another group of nosological forms that can cause severe complications and (or) death (PC-6);
- Timely identify life-threatening disorders of internal organs, use methods of their immediate elimination, take anti-shock measures;
- Willingness to prescribe adequate treatment to trauma patients in accordance with the diagnosis, to implement the algorithm for choosing drug and non-drug therapy for specialized patients;
- Readiness to provide medical assistance in emergency situations, including participation in medical evacuation (PC-7).

In rehabilitation activities (PC-8):

- Readiness for the use of natural healing factors, drug, non-drug therapy and other methods in patients in need of medical rehabilitation and spa treatment.
- Willingness to apply various rehabilitation measures (medical, social, psychological) for the most common injuries and diseases of the musculoskeletal system;
- Willingness to give recommendations on the choice of the optimal regimen during the rehabilitation of trauma patients (physical activity depending on the morphological and functional status), to determine the indications and contraindications for the appointment of physiotherapy exercises, physiotherapy, reflexology.

In psychological and pedagogical activity (PC-9):

- Willingness to form motivation among the population, patients and their families, aimed at maintaining and strengthening their health and the health of others (PC-9).

In organizational and managerial activities (PC-10,11,12):

- Willingness to use regulatory documents adopted in healthcare (laws of the Kyrgyz Republic, technical regulations, international and national standards, orders, recommendations, the international system of units (SI), current international classifications), as well as documentation for assessing the quality and efficiency of the work of medical organizations of a trauma profile (PC-10).
- Willingness to use the knowledge of the organizational structure of the trauma profile, management and economic activities of medical institutions of various types to provide medical assistance to analyze the performance of the work of their structural units, to carry out assessment of the effectiveness of modern medical and institutional and socio-economic technologies for the provision of medical services for patients with injuries and diseases of the musculoskeletal - propulsion system (PK-11).
- Readiness to organize medical assistance in emergency situations, including medical evacuation (PC-12).

[I1] 2 more electives Not all listed