

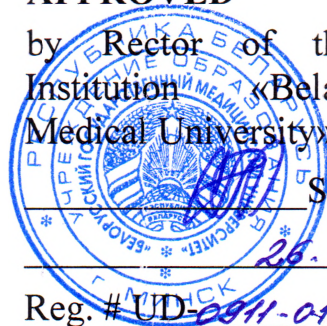
MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational Institution
«BELARUSIAN STATE MEDICAL UNIVERSITY»

**Контрольный
экземпляр**

APPROVED

by Rector of the Educational
Institution «Belarusian State
Medical University»

S.P.Rubnikovich



Reg. # UD-2011-01-47/25-26/edu.

TRAUMATOLOGY AND ORTHOPEDICS

**Curriculum of the educational institution
in the academic discipline for the specialty**

1-79 01 01 «General Medicine»

Curriculum is based on the educational program «Traumatology and Orthopedics», approved 26.06.2025, registration # УД-0911-01-47/2526/уч.; on the educational plan in the specialty 1-79 01 01 «General Medicine», approved 16.04.2025, registration # 7-07-0911-01/2526/mf.

COMPILERS:

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RECOMMENDED FOR APPROVAL:

by the Department of Traumatology and Orthopedics with course of advanced training and retraining of the Educational Institution «Belarusian State Medical University»

(protocol #13 of 15.05.2025);

by the Scientific and Methodological Council of the Educational Institution «Belarusian State Medical University»

(protocol #10 of 26.06.2025)

EXPLANATORY NOTE

«Traumatology and Orthopedics» – the academic discipline of the module «Surgical Module 3», which contains systematized scientific knowledge about etiology, pathogenesis, mechanisms of injury, clinical manifestations, methods of laboratory and radiological diagnostics, differential diagnosis, comprehensive conservative and surgical treatment, medical rehabilitation and prevention of congenital and acquired diseases and injuries of the musculoskeletal system.

The aim of the academic discipline «Traumatology and Orthopedics» is the formation of specialized competencies for solving professional tasks in the diagnosis, treatment and prevention of diseases and injuries in adults and children.

The objectives of the academic discipline «Traumatology and Orthopedics» are to form students' scientific knowledge among students about the etiology and pathogenesis, clinical manifestations and complications, methods of diagnosis, treatment and prevention of diseases and injuries in adults and children, as well as the skills and abilities necessary for:

- the examination of patients with acute trauma, congenital and post-traumatic diseases of the musculoskeletal system;

- the diagnosis of the main nosological forms of acute injuries and diseases of the musculoskeletal system;

- the interpretation of laboratory and instrumental test results;

- for formulating a diagnosis;

- medical care in emergency situations for injuries of the limbs, pelvis and spine;

- immobilization of bone fractures of the limbs, pelvis and spine;

- determination of the indications for conservative and surgical management of patients with musculoskeletal injuries and orthopedic diseases;

- medical rehabilitation of patients with diseases and injuries of the musculoskeletal system;

- development of clinical thinking in compliance with the norms of medical ethics and deontology.

Relations to other academic disciplines

The knowledge, skills and abilities acquired during the study of the academic discipline «Traumatology and Orthopedics» are necessary for successful mastering of the academic disciplines «Surgical Diseases», «Internal Medicine», «Urology».

Studying the academic discipline «Traumatology and Orthopedics» should ensure the formation of students' specialized competence: diagnose and provide primary and specialized medical care for surgical and urological diseases and the most common malignancies.

As a result of studying the academic discipline «Traumatology and Orthopedics» the student should

know:

- types of injuries and their characteristics;

- etiology, pathogenesis, clinical presentation, methods of diagnosis, differential diagnosis, treatment and prevention of the most common orthopedic diseases and injuries in patients of different ages;

the degree of emergency medical care for injuries of the musculoskeletal system;
rules of medical ethics and deontology in traumatology and orthopedics;

be able to:

plan and conduct communicative interaction with the patient based on the assessment of their mental and personal characteristics and individual reaction to the trauma;

analyze regulatory legal acts governing legal relations related to the provision of medical care;

conduct a clinical examination of a patient with musculoskeletal injuries;

interpret the results of laboratory and instrumental diagnostic methods for injuries and diseases of the musculoskeletal system;

recognize typical injuries of the musculoskeletal system and skeletal injuries;

provide emergency medical assistance for musculoskeletal injuries;

identify congenital diseases and deformities of the musculoskeletal system and refer patients to specialized healthcare organizations for consultation;

establish and formulate a diagnosis;

complete medical documentation;

master:

methods of examining a patient with musculoskeletal injuries;

techniques for providing emergency medical assistance for musculoskeletal injuries;

methods of diagnosing injuries, degenerative, inflammatory and metabolic joint diseases.

Total number of hours for the study of the discipline is 120 academic hours, of which 69 classroom hours and 51 hours of student independent work. Classroom hours according to the types of studies: lectures – 15 hours (including 3 hours of supervised student independent work (SSIW)), practical classes –54 hours.

Intermediate assessment is carried out according to the syllabus of the specialty in the form of examination (9(10) semester).

Form of higher education – full-time.

ALLOCATION OF ACADEMIC TIME ACCORDING TO SEMESTERS OF STUDY

Code, name of the specialty	Semester	Total number of academic hours	Number of classroom hours				Out-of-class self-studies	Form of intermediate assessment
			Number of classroom hours	including				
				class lectures	SSIW	practicals		
1-79 01 01 «General Medicine»	9 (10)	120	69	12	3	54	51	Exam

THEMATIC PLAN

Section (topic) name	Number of class hours	
	lectures (incl. SSIW)	practical
1. General Traumatology	6	12
1.1. Introduction to the academic discipline «Traumatology and Orthopedics». Prevention of injuries. Principles and methods of treatment of patients with injuries and diseases of the musculoskeletal system	1,5	3
1.2. Features of examination of patients with injuries and diseases of the musculoskeletal system. Regeneration of bone tissue in normal and pathological conditions	1,5	3
1.3. Multiple and associated injuries	1,5	3
1.4. Open fractures	1,5	3
2. Clinical Traumatology	1,5	24
2.1. Fractures and dislocations of the clavicle. Humeral fractures	-	6
2.2. Injuries of the elbow joint, forearm	-	3
2.3. Injuries of the hand	1,5	3
2.4. Fractures of the pelvic bones	-	3
2.5. Injuries of the spine. Traumatic dislocations of shoulder, forearm, hip	-	3
2.6. Femur fractures	-	3
2.7. Injuries of the knee joint. Fractures of the shin bones. Ankle and foot injuries	-	3
3. Orthopedics	7,5	18
3.1. Developmental hip dysplasia	1,5	3
3.2. Congenital clubfoot. Congenital muscular torticollis	-	3
3.3. Osteoarthritis	1,5	4
3.4. Posture and types of its disorders. Scoliosis	1,5	2
3.5. Bone tumors	1,5	2
3.6. Osteochondropathies	-	2
3.7. Static foot deformities	1,5	2
Total hours	15	54

CONTENT OF THE EDUCATIONAL DISCIPLINE

1. General Traumatology

1.1. Introduction to the academic discipline «Traumatology and Orthopedics». Prevention of injuries. Principles and methods of treatment of patients with injuries and diseases of the musculoskeletal system

Introduction to the academic discipline «Traumatology and Orthopedics». The concept of traumatology and orthopedics. The emblem of orthopedics. Development of traumatological and orthopedic medical care in the Republic of Belarus. Structure of traumatism, its prevention. Modern principles of treating limb bone fractures. Methods of bone fracture treatment: conservative treatment, surgical treatment. Types of plaster casts. Technique for applying plaster splints and circular bandages, indications for their use. Advantages and disadvantages of the fixation method of treatment, possible complications and their prevention. Continuous and temporary skeletal traction, indications for use, technique, advantages of the method. Types of osteosynthesis (onlay, intramedullary, external, transosseous, compression-distraction), indications, advantages of the method, possible complications and their prevention. Medical ethics and deontology in traumatology and orthopedics.

1.2. Features of examination of patients with injuries and diseases of the musculoskeletal system. Regeneration of bone tissue in normal and pathological conditions

Types of patient positions with musculoskeletal system diseases. Methods for determining the axis of a limb and the spine. Main types of limb and spine axis deformities. Methods of palpation and percussion in patients with injuries and diseases of the musculoskeletal system. Methods for determining the range of motion in joints. Methods for measuring limb length and circumference. Types of limb shortening, methods for their determination. Spinal deformities (scoliotic deformity, kyphosis, lordosis). Gait changes (limp, its types).

Definitive and probable clinical signs of fractures and dislocations. Types of bone fragment displacement and methods for their determination. Special diagnostic methods in traumatology and orthopedics, indications for their use, methodology, interpretation of obtained data. Radiological signs of fractures, dislocations and the most common orthopedic diseases.

Pathways of bone tissue regeneration. Physiological and reparative regeneration. Stages of callus formation and its types. Primary and secondary union of a bone wound. Impairment of reparative regeneration of a bone wound (delayed union and non-union/pseudoarthrosis), causes, treatment methods.

Examining patients with injuries and diseases of the musculoskeletal system; collecting complaints and trauma/medical history; objective examination; formulating an examination plan; interpreting results of instrumental examination methods; establishing a diagnosis; justifying a treatment plan and indications for surgical intervention. Completing the inpatient medical record for a patient with a limb injury.

1.3. Multiple and associated injuries

Definition of «polytrauma»: multiple, associated, combined injuries, their characteristics. Clinical features of polytrauma (mutual burdening syndrome, treatment

incompatibility, acute complications of injuries – shock, massive blood loss, toxemia, acute renal failure, fat embolism, thromboembolism, etc.).

Emergency medical care at the pre-hospital stage: methods for identifying life-threatening conditions, methods for their elimination in patients with musculoskeletal trauma; determining the extent of injuries; identifying the dominant injury.

Choice of anti-shock therapy methods in patients with polytrauma: novocaine block, blood substitutes, anti-shock solutions. Transport immobilization in polytrauma. Characteristics of the hospital stage of treatment for patients with polytrauma. Means and methods of anti-shock therapy at the hospital stage. Features of the resuscitation period, its tasks. Methods of therapeutic immobilization in patients with multiple, associated and combined injuries. Choosing the optimal timing and extent of surgical interventions. Tactics of programmed multi-stage surgical treatment (Damage Control) in patients with severe trauma. Diagnosis, prevention and treatment of complications of musculoskeletal injuries. Features of the rehabilitation period in patients with polytrauma. Medical, social and vocational rehabilitation of patients who have suffered multiple, associated and combined injuries of the musculoskeletal system.

1.4. Open fractures

Frequency and features of open limb fractures. Classification of open fractures. Clinical manifestations, diagnosis of open fractures, complications. Principles of staged treatment for victims with open fractures. Primary surgical wound treatment in open fractures. Indications for osteosynthesis and skeletal traction, complications. Features of gunshot fractures.

2. Clinical Traumatology

2.1. Fractures and dislocations of the clavicle. Humeral fractures

Clavicle fractures: classification, mechanism of injury, mechanism of fragment displacement. Clinical manifestations and diagnosis of clavicle fractures. Emergency medical care and treatment of clavicle fractures.

Clavicle dislocations: classification, mechanism of injury, clinical manifestations, emergency medical care, treatment, prevention of complications.

Classification of injuries to the proximal metaepiphysis of the humerus. Fractures of the surgical neck of the humerus: classification, mechanism of injury, mechanism of fragment displacement. Clinical manifestations and diagnosis of fractures of the surgical neck of the humerus. Emergency medical care and treatment of fractures of the surgical neck of the humerus.

Fractures of the humeral diaphysis: classification, mechanism of injury, mechanism of fragment displacement, clinical manifestations, diagnosis, emergency medical care and treatment. Supracondylar fractures of the humerus: classification, mechanism of injury, mechanism of fragment displacement, diagnosis, emergency medical care and treatment, complications (acute arterial insufficiency and Volkmann's contracture).

Examining patients with injuries to the clavicle and humerus; collecting complaints and trauma history; objective examination; formulating an examination plan; interpreting results of instrumental examination methods; establishing a

diagnosis; justifying a treatment plan and indications for surgical intervention. Completing the inpatient medical record for a patient with a limb injury.

2.2. Injuries of the elbow joint, forearm

Fractures of the olecranon: mechanism of injury, diagnosis, methods of conservative and surgical treatment, indications for their use, consolidation periods. Fractures of the radial head and neck: mechanism of injury, clinical manifestations, diagnosis, treatment.

Fractures of the forearm bone diaphysis: classification, mechanism of injury, mechanism of fragment displacement, diagnosis, emergency medical care and treatment.

Distal radius fracture (Colles and Smith fractures): mechanism of injury, clinical manifestations, diagnosis, emergency medical care and treatment, union periods and return to work.

Examining patients with injuries to the elbow joint and forearm; collecting complaints and trauma history; objective examination; formulating an examination plan; interpreting results of instrumental examination methods; establishing a diagnosis; justifying a treatment plan and indications for surgical intervention. Completing the inpatient medical record for a patient with a limb injury.

2.3. Injuries of the hand

Frequency of hand injuries, their structure. Classification of hand injuries. Clinical manifestations, diagnosis and treatment of closed hand injuries. Treatment of open hand injuries. Principles of surgical restoration of damaged hand structures. Concept of replantation and revascularization.

Fractures of the carpal bones (scaphoid, lunate): clinical manifestations, diagnosis, conservative and surgical treatment methods.

Injuries to the flexor and extensor tendons of the hand and fingers, their diagnosis. Conservative and surgical treatment of finger extensor tendon injuries. Principles of surgical treatment of finger flexor tendon injuries.

Fractures of the metacarpal bones and phalanges: diagnosis, treatment. Principles of treating open hand injuries.

Examining patients with hand injuries; collecting complaints and trauma history; objective examination; formulating an examination plan; interpreting results of instrumental examination methods; establishing a diagnosis; justifying a treatment plan and indications for surgical intervention. Completing the inpatient medical record for a patient with a limb injury.

2.4. Fractures of the pelvic bones

Classification of pelvic bone fractures, mechanism of injury. Clinical manifestations and diagnosis of pelvic bone fractures. Emergency medical care for victims. Anti-shock therapy for pelvic fractures at the pre-hospital stage of medical care. Conservative and surgical methods of treating patients with various types of pelvic fractures.

Examining patients with polytrauma, spinal and pelvic injuries; collecting complaints and medical history; objective examination; formulating an examination

plan; interpreting results of instrumental examination methods; establishing a diagnosis; justifying a treatment plan and indications for surgical intervention.

2.5. Injuries of the spine. Traumatic dislocations of shoulder, forearm, hip

Classification of spinal injuries. Isolated ligament injuries: mechanism of injury, diagnosis, treatment methods. Fractures of transverse processes, arches and articular processes: diagnosis, treatment. Vertebral body fractures: mechanism of injury, typical localization of injuries, diagnostic principles. Treatment methods for uncomplicated vertebral body fractures: conservative (functional, single-stage reposition, gradual reclination) and surgical methods. Methods of therapeutic immobilization for vertebral body fractures. Union periods for vertebral body fractures. Features of treating patients with uncomplicated vertebral body fractures in outpatient settings.

Diagnosis of complicated spinal injuries. Scope of emergency medical care for patients with complicated spinal injuries. Modern methods of treating complicated spinal fractures. Examining patients with polytrauma, spinal and pelvic injuries; collecting complaints and medical history; objective examination; formulating an examination plan; interpreting results of instrumental examination methods; establishing a diagnosis; justifying a treatment plan and indications for surgical intervention.

Dislocations of the shoulder, forearm, hip: classification, mechanism of injury, clinical manifestations, emergency medical care. Methods for reducing dislocations in large joints, treatment in the post-traumatic period, prevention of complications.

Examining patients with traumatic dislocations; collecting complaints and trauma history; objective examination; formulating an examination plan; interpreting results of instrumental examination methods; establishing a diagnosis; justifying a treatment plan. Completing the inpatient medical record for a patient with a limb injury.

2.6. Femur fractures

Classification of injuries to the proximal femur. Femoral neck fractures (valgus and varus fractures), features of bone regeneration in this area, diagnosis, clinical manifestations, complications, surgical treatment. Conservative treatment of valgus fractures.

Fractures of the trochanteric region of the femur: mechanism of injury, clinical manifestations, diagnosis, treatment methods.

Femoral diaphysis fractures: classification, mechanism of injury, mechanism of fragment displacement depending on the fracture level, clinical manifestations, diagnosis, treatment methods, union periods, prevention of possible complications. Treatment of patients with femoral fractures in outpatient settings.

Examining patients with femoral injuries; collecting complaints and trauma history; objective examination; formulating an examination plan; interpreting results of instrumental examination methods; establishing a diagnosis; justifying a treatment plan and indications for surgical intervention. Completing the inpatient medical record for a patient with a limb injury.

2.7. Injuries of the knee joint. Fractures of the shin bones. Ankle and foot injuries

Fractures and dislocations of the patella: types of fractures and mechanism of injury, clinical picture, diagnosis, treatment methods.

Fractures of the femoral and tibial condyles: mechanism of injury, clinical manifestations, diagnosis, treatment.

Meniscus injuries: classification, clinical manifestations, diagnosis, treatment.

Injuries to the ligamentous apparatus of the knee joint (collateral and cruciate ligaments, patellar ligament), clinical signs. Diagnosis of knee ligament injuries. Role and place of arthroscopy in the diagnosis and treatment of intra-articular knee joint injuries.

Fractures of the tibia and fibula diaphysis: mechanism of injury, clinical manifestations, diagnosis, treatment.

Ankle ligament injuries: differential diagnosis, treatment. Ankle fractures: classification, clinical manifestations, diagnosis, conservative and surgical treatment methods.

Fractures of the talus and calcaneus: mechanism of injury, clinical manifestations, diagnosis, treatment.

Fractures of the metatarsal bones and phalanges. Toe dislocations. Diagnosis, treatment of forefoot injuries.

Examining patients with knee joint, leg bone and foot injuries; collecting complaints and trauma history; objective examination; formulating an examination plan; interpreting results of instrumental examination methods; establishing a diagnosis; justifying a treatment plan and indications for surgical intervention. Completing the inpatient medical record for a patient with a limb injury.

3. Orthopedics

3.1. Developmental hip dysplasia

Congenital hip dislocation: etiology, pathogenesis, pathological anatomy. Degrees of hip dysplasia and their characteristics. Clinical symptoms of congenital hip dislocation in newborns and older children. Radiological and ultrasound diagnosis of various degrees of hip dysplasia. Early detection of hip dysplasia and treatment of patients in the first year of life. Conservative and surgical treatment of congenital hip dislocation in children and adolescents. General principles of surgical treatment of congenital hip dislocation, timing. Preventive examinations of children. Organization of orthopedic medical care for children in the Republic of Belarus.

3.2. Congenital clubfoot. Congenital muscular torticollis

Congenital clubfoot: frequency, etiology, pathogenesis, pathological anatomy, clinical signs in different age groups. Treatment of congenital clubfoot depending on severity and the child's age, medical rehabilitation. Orthopedic footwear.

Congenital muscular torticollis: frequency, etiology, pathological anatomy, classification, clinical signs. Treatment of congenital muscular torticollis depending on severity, type, child's age, medical rehabilitation.

Examining patients with congenital musculoskeletal diseases; collecting complaints and medical history; objective examination; formulating an examination

plan; interpreting results of instrumental examination methods; establishing a diagnosis; justifying a treatment plan and indications for surgical intervention.

3.3. Osteoarthritis

Etiology and pathogenesis of deforming osteoarthritis (osteoarthritis), classification by etiology and stage of disease development. Clinical manifestations and diagnosis of deforming osteoarthritis. Most common localizations of osteoarthritis: coxarthrosis, gonarthrosis, ankle arthrosis, rhizarthrosis. Principles and methods of treating deforming osteoarthritis depending on etiology and stage of disease development, conservative treatment and indications for surgical treatment. Methods of surgical treatment of deforming osteoarthritis: corrective osteotomies of the pelvis, femur, tibia and their types, joint arthroplasty. Joint replacement. Medical and vocational rehabilitation.

3.4. Posture and types of its disorders. Scoliosis

Definition of «posture». Types of postural disorders (according to Stoffel). Diagnosis and prevention of postural defects.

Scoliosis: definition, etiopathogenesis, pathological anatomy, classification, clinical manifestations, radiological diagnosis. Changes in the cardiovascular and respiratory systems in patients with scoliotic disease. Signs of possible progression of spinal deformity. Modern conservative and surgical treatment of scoliosis. The role of specialized boarding schools in treating patients with scoliotic disease.

3.5. Bone tumors

Frequency and prevalence of bone neoplasms, clinical and morphological classification. Characteristics of malignant and benign tumors. Clinical manifestations of bone neoplasms. Instrumental diagnostic methods for bone neoplasms (radiological, clinical laboratory, computed tomography and magnetic resonance imaging). Principles of treating bone neoplasms, medical and social rehabilitation of patients.

3.6. Osteochondropathies

Osteochondropathies: etiology, pathogenesis, pathological anatomy. Clinical manifestations of Legg-Calvé-Perthes disease, Osgood-Schlatter disease, Köhler disease I and II, Scheuermann's disease. Radiological diagnosis, treatment and prevention of osteochondropathies.

3.7. Static foot deformities

Etiology, pathogenesis of static foot deformities, classification. Etiology and pathogenesis of longitudinal and transverse flatfoot. Clinical manifestations and methods for detecting static foot deformities. Methods for treating flattened foot arches. Hallux valgus, etiology and pathogenesis, disease course, treatment methods. Hammertoe deformity: causes, clinical manifestations, treatment principles. Indications for conservative and surgical methods of treating static foot deformities, medical rehabilitation of patients.

Examining patients with musculoskeletal diseases; collecting complaints and medical history; objective examination; formulating an examination plan; interpreting results of instrumental examination methods; establishing a diagnosis; justifying a treatment plan and indications for surgical intervention.

EDUCATIONAL DISCIPLINE «TRAUMATOLOGY AND ORTHOPEDICS» CURRICULAR CHART

Section, topic #	Section (topic) name	Number of class hours		Supervised student independent work	Literature	Practical skills	Form of control	
		lectures	practical				of practical skills	of current / intermediate assessment
	Lectures	12	-	3				
1.	Introduction to the academic discipline «Traumatology and Orthopedics». Prevention of injuries. Principles and methods of treatment of patients with injuries and diseases of the musculoskeletal system	1,5	-	-	1-4			
2.	Regeneration of bone tissue in normal and pathological conditions	-	-	1,5	1-4			Electronic testing
3.	Multiple and associated injuries	1,5	-	-	1-4			
4.	Open fractures	1,5	-	-	1-4			
5.	Injuries of the hand	1,5	-	-	1-4			
6.	Developmental hip dysplasia	1,5	-	-	1-4			
7.	Osteoarthritis	1,5	-	-	1-4			
8.	Posture and types of its disorders. Scoliosis	1,5	-	-	1-4			
9.	Bone tumors	-	-	1,5	1-4			Electronic testing
10.	Static foot deformities	1,5	-	-	1-4			
	Practical lessons	-	54	-				
1.	Introduction to the academic discipline «Traumatology and Orthopedics». Prevention of injuries. Principles and methods of treatment of patients with injuries and diseases of the musculoskeletal system. Features of examination of patients with injuries and diseases of the musculoskeletal	-	6	-	1-4	Determining the axis of the upper limb. Determining the axis of the lower limb. Upper limb length measurement. Lower limb length	Solving situational problems	Oral questioning, electronic testing, solving situational problems

	system. Regeneration of bone tissue in normal and pathological conditions					measurement		
2.	Multiple and associated injuries. Open fractures	-	6	-	1-4	Transport immobilization technique for humerus fractures. Transport immobilization technique for radius fractures Transport immobilization for femur fractures. Transport immobilization for lower leg bone fractures. Radiographic description of displacement type	Solving situational problems	Oral questioning, electronic testing, solving situational problems*
3.	Fractures and dislocations of the clavicle. Humeral fractures	-	6	-	1-4	Measurement of shoulder joint range of motion. Transport immobilization technique for humerus fractures. Radiographic description of displacement type	Solving situational problems	Oral questioning, electronic testing, solving situational problems
4.	Injuries of the elbow joint, forearm. Injuries of the hand	-	6	-	1-4	Measurement of elbow joint range of motion. Transport immobilization technique for radius fractures. Radiographic description of displacement type	Solving situational problems	Oral questioning, electronic testing, solving situational problems
5.	Fractures of the pelvic bones. Injuries of the spine. Traumatic dislocations of shoulder, forearm, hip	-	6	-	1-4	Radiographic description of displacement type. Measurement of shoulder joint range of motion. Measurement of hip joint range of motion	Solving situational problems	Oral questioning, electronic testing, solving situational problems

6.	Femur fractures. Injuries of the knee joint. Fractures of the shin bones. Ankle and foot injuries	-	6	-	1-4	Measurement of hip joint range of motion. Measurement of ankle joint range of motion. Transport immobilization for femur fractures. Transport immobilization for lower leg bone fractures. Radiographic description of displacement type.	Solving situational problems	Oral questioning, electronic testing, solving situational problems*
7.	Developmental hip dysplasia. Congenital clubfoot. Congenital muscular torticollis	-	6	-	1-4	Determining the axis of the lower limb. Lower limb length measurement	Solving situational problems	Oral questioning, electronic testing, solving situational problems
8.	Osteoarthritis. Posture and types of its disorders. Scoliosis	-	6	-	1-4	Measurement of hip joint range of motion	Solving situational problems	Oral questioning, electronic testing, solving situational problems
9.	Bone tumors. Osteochondropathies. Static foot deformities	-	6	-	1-4	Radiographic description of displacement type	Solving situational problems	Oral questioning, electronic testing, solving situational problems*
Total hours		12	54	3				EXAM

*This is a mandatory form of current certification.

INFORMATION AND INSTRUCTIONAL UNIT

LITERATURE

Basic (relevant):

1. Traumatology and orthopedics : a textbook for foreign students / V. V. Lashkovsky [et al.]; edited by V. V. Lashkovsky. – Minsk : New knowledge, 2024. – 376 p.

Additional:

2. Garkavi, A. V. Traumatology and orthopedics : textbook / A. V. Garkavi, A. V. Lychagin. – Moskow : Geotar-Media, 2023. – 781 p.

3. Traumatology and orthopedics : textbook for students of higher medical schools IV level of accreditation / O. A. Burianov [et al.]. – Vinnytsia : Nova Knyha, 2018. – 400 p.

Electronic courseware for the academic discipline «Traumatology and Orthopedic»

4. <https://etest.bsmu.by/course/view.php?id=325>.

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

The time allocated for independent work can be used by students for:

- preparing for lectures, practical classes;
- preparing for exams in the academic discipline;
- studying the topics (issues) designed for independent work;
- preparing thematic reports, abstracts, presentations;
- taking notes of educational literature;
- preparing reports;
- compiling a review of scientific literature on a given topic;
- execution of information and demonstration materials (stands, posters, graphs, tables, newspapers, etc.);
- compilation of a thematic selection of literature sources, Internet sources.

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF SUPERVISED STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

APPROXIMATE LIST OF TASKS FOR SUPERVISED STUDENT INDEPENDENT WORK:

- preparation of thematic reports, abstracts, presentations;
- presentation of reports;
- taking notes of original sources (sections of anthologies, collections of documents, monographs, textbooks);
- computer testing;
- production of models, laboratory and educational aids;
- preparation of tests for the organization of mutual control;
- preparation of didactic materials;
- design of information and demonstration materials (stands, posters, graphs, tables, newspapers, etc.).

FORMS OF CONTROL OF SUPERVISED STUDENT INDEPENDENT WORK:
electronic testing.

LIST OF AVAILABLE DIAGNOSTIC TOOLS

The following forms of current certification are used to diagnose competencies:
oral questioning;
electronic testing;
solving situational problems.

LIST OF AVAILABLE TEACHING METHODS

Traditional method;
active (interactive) methods:
 training based on simulation technologies;
 Problem-Based Learning (PBL);
 Case-Based Learning (CBL);
 Research-Based Learning (RBL).

LIST OF PRACTICAL SKILLS

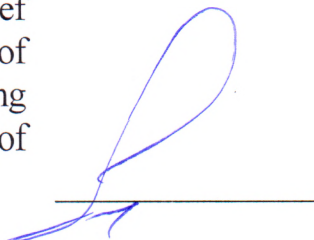
Name of practical skills	Form of practical skills control
1. Determining the axis of the upper limb	Solving situational problems
2. Determining the axis of the lower limb	Solving situational problems
3. Upper limb length measurement	Solving situational problems
4. Lower limb length measurement	Solving situational problems
5. Measurement of shoulder joint range of motion	Solving situational problems
6. Measurement of elbow joint range of motion	Solving situational problems
7. Measurement of hip joint range of motion	Solving situational problems
8. Measurement of knee joint range of motion	Solving situational problems
9. Measurement of ankle joint range of motion	Solving situational problems
10. Transport immobilization technique for humerus fractures	Solving situational problems
11. Transport immobilization technique for radius fractures	Solving situational problems
12. Transport immobilization for femur fractures	Solving situational problems
13. Transport immobilization for lower leg bone fractures	Solving situational problems
14. Radiographic description of displacement type	Solving situational problems

**PROTOCOL OF THE CURRICULUM APPROVAL
BY OTHER DEPARTMENTS**

Title of the discipline requiring approval	Department	Amendments to the curriculum in the academic discipline	Decision of the department, which designed the curriculum (date, protocol #)
1. Surgical Diseases	Surgical Diseases with training and advanced training courses	No comments	15.05.2025, protocol #13
2. Internal Diseases	Internal Medicine, Gastroenterology and Nutrition with training and advanced training courses	No comments	15.05.2025, protocol #13
3. Urology	Urology and Nephrology with training and advanced training courses	No comments	15.05.2025, protocol #13

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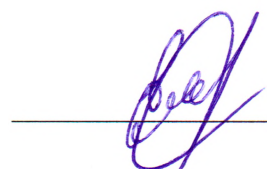
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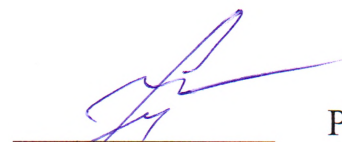
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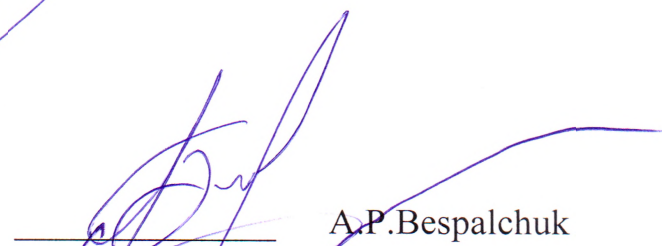
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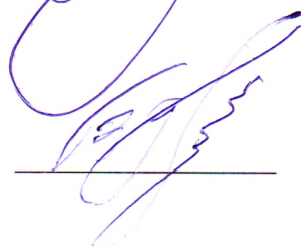
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Curriculum content, composition and the accompanying documents comply with the established requirements.

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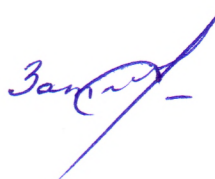
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