

**Ministry of Science and Higher Education of the Russian Federation  
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Institute of Medicine, Ecology and Physical Education**

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**INSTRUCTIONAL GUIDELINES  
FOR INDEPENDENT WORK OF STUDENTS  
ON THE COURSE "TRAUMATOLOGY, ORTHOPEDICS"**

**Ulyanovsk – 2022**

UDP  
LBC

*Recommended for use the educational process  
by decision of the Academic Council of the Institute of Medicine, Ecology and  
Physical Education of Ulyanovsk State University,  
Minutes № 9/239 of 18.05.2022*

**Reviewer:** Head of the Department of General and Operative Surgery with Topographical Anatomy and Dentistry Course of FGBOU VE “Ulyanovsk State University”, Doctor of Medical Sciences, Professor Antonina Vasilievna Smolkina

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**Methodological guidelines for the organization of independent work of residents on the discipline "Traumatology, orthopedics " / Shevalaev G.A. - Ulyanovsk, Ulianovsk State University, 2022.**

Methodical instructions are prepared in accordance with the working program of the discipline "Traumatology, orthopedics ". The structure includes methodical instructions for each studied topic according to the plan of extracurricular independent work. Methodical instructions are intended for residents of the Faculty of Postgraduate Medical and Pharmaceutical Education, studying on specialty «31.05.01 General medicine»

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## INTRODUCTION

Guidelines are intended for the students' independent work of at extracurricular time while studying the course "Traumatology and orthopedics". This course is part of the specialty program 31.05.01 General Medicine.

Independent extracurricular work is a student's activity planned as part of the curriculum, which is carried out on assignment, with methodological guidance and supervision of the teacher, but without his direct participation.

**The aim of independent extracurricular work** is to master fundamental knowledge, professional skills and experience in creative, research activities, develop independence, organization, and a creative approach to solving problems of educational and professional levels.

The aims of organizing independent extracurricular work are:

1. Motivate students to master curricula.
2. To broaden the horizons of students, deepen their knowledge, develop skills in research activities, and show elements of creativity.
3. Promote the development of general and professional competencies.
4. To create conditions for the formation of students' ability to self-education, self-management and self-development.

For extracurricular studies, those questions are offered which main idea cannot be fully considered during classroom studies. Extracurricular tasks are carried out to the corresponding final control.

During the preparation for practical classes, students are invited to use the bibliographic list, the indicated literature that is located in the USU scientific library funds or in the databases of electronic library systems.

Writing an abstract study requires autonomy and creativity. The main purpose of the work is to disclose one of the topics proposed by the teacher or chosen by the student himself, in agreement with the teacher. When writing the abstract, educational and scientific literature is used and it is necessary to use materials from scientific articles of journals that are available on the websites of scientific databases and search engines. The abstract should be 15 - 20 pages, submitted and defended according to the students' schedule of independent work. The abstract includes the following structural elements: - front page; - content; - introduction; - background paper; - conclusion; - bibliographic list; - supplements.

*Front page.* The front page indicates the name of the institution of higher education, the faculty, the department where the assignment, topic, last name and initials of the student, the academic degree and academic rank, last name and initials of the supervisor, the city and the year of work were issued.

*Contents.* The content contains the names of all sections and subsections of the work, each of which is printed on a new line. At the end of the line, the number of the page should be placed on which this heading is printed in the text. Page numbers are printed near the right margin, all are at the same distance from the edge of the page. It should be noted that the names of sections and subsections in the table of contents should exactly match the headings of the text.

*Introduction.* The first section of the abstract is an introduction. In the introduction, the relevance of the topic under consideration, the development paths at the present stage, the

existing problems and ways to solve them are justified. The volume of this section should not exceed 1.5 - 3 typewritten pages.

*Background paper.* A review of the scientific literature on the topic illustrates the author's ability to analyze the available data in a creative way, highlight the main thing and determine ways to search for literature on specific issues.

*Conclusion.* The work should take on a finished look so that the reader can quickly understand the essence of the issue in question without reading the main text. In conclusion, the author outlines the essence of the work, formulates brief conclusions on the material presented and gives his own point of view on the problems presented in the work. The findings should be clear and informative.

*The list of used literature.* It is completed in accordance with existing GOST requirements.

*Applications.* If they are necessary. The paper is defended according to the schedule of the educational process. To defend the report, the student prepares presentation materials, designed as a computer presentation, which is made in the form of of slides shown on screens for the audience. The abstract study are formatted in accordance with the general requirements for the construction, presentation and execution of text documents of educational and scientific activities and are handed over to the teacher according to the schedule for independent work.

## **Lesson 1: Diagnostic methods in traumatology, orthopedics**

The purpose of the lesson is to study diagnostic methods for injuries and diseases of the musculoskeletal system.

Questions on the topic for independent work:

1. True and probable signs of joint diseases and injuries
2. Special methods for examining trauma and orthopedic patients.
3. Paraclinical methods in traumatology and orthopedics. Indications for their use.
4. Basic principles for the fracture diagnostics at the hospital and prehospital stages of treatment.

Report topics:

1. Instrumental research methods in traumatology and orthopedics.
2. Methods of medical imaging in traumatology.
3. Magnetic resonance imaging for joint damage.

## **Lesson 2: Methods of treatment in traumatology, orthopedics**

The purpose of the lesson is to study the basic methods of conservative and surgical treatment for injuries and diseases of the musculoskeletal system.

Questions on the topic for independent work:

1. The most common mistakes and complications in the treatment of fractures.
2. Clinical and radiological signs of nonunion, false joints.
3. Modern principles of surgical treatment of false joints.
4. Compression-distraction method in the treatment of false joints. The structure of Ilizarov frame, Gudushauri frame, Volkov frame.
5. Modern methods of bone grafting used in false joints treatment. Types of bone grafting.

Report topics:

1. Conservative treatments for fractures of long bones
2. Modern methods of osteosynthesis of the femoral bone.
3. External fixation devices for pelvic fractures.
4. Treatment methods for fractures in the elderly and senile

## **Topic 3. Injuries of the upper and lower limbs**

The purpose of the lesson is to study the features of injuries and treatment of the upper limb

Questions on the topic of the lesson for independent work:

1. Indications and typical methods of conservative treatment of shoulder fractures.
2. Indications for surgical treatment of shoulder fractures.
3. Rules for the imposition of medical and transport splints in case of shoulder fractures.

4. Timing of shoulder fracture healing and restoration of working capacity.
5. Features of the treatment of patients on an outpatient basis.
6. The mechanism of injury and classification of fractures of the elbow joint, forearm and hand.
7. Signs of complications of the tendons of the elbow joint and forearm (damage to blood vessels, nerves, ischemic contracture of Volkmann).
8. Timing of fusion of the bones of the forearm and hand and the timing of recovery.
9. The mechanism of injury causing a hip fracture of various localization.
10. Absolute and relative signs of hip fractures.
11. The volume of anti-shock measures in case of hip shaft fracture.
12. Rules and technique of transport immobilization for hip fractures.
13. Features of skeletal traction treatment of hip fractures in the upper third, middle and lower third.
14. Features of the management of patients on an outpatient basis.
15. Diagnosis of contusion, hemarthrosis of the knee joint, dislocation of the patella and lower leg.
16. Diagnosis of injuries of the menisci and ligamentous apparatus of the knee joint.
17. Rules for the provision of emergency care for injuries of the knee joint.

Control form: questions, test control, situational tasks.

Report topics:

1. Dislocations of the shoulder: classification, clinical picture, diagnostics and treatment.
2. Dislocations of the forearm: classification, clinical picture, diagnostics and treatment.
3. Clavicle fractures. Clinical picture, diagnostics and treatment.
4. Fractures of the upper arm bone. Clinical picture, diagnostics and treatment.
5. Fractures of the proximal upper arm bone in old age.
6. Fractures of the bones of the forearm. Clinical picture, diagnostics and treatment.

**Topic 4. Injuries to the chest, pelvis and spine**

The purpose of the lesson is to study the features of injuries and treatment of the lower limb.

Questions on the topic of the lesson for independent work:

1. The mechanism of injury and classification of fractures of the ribs, sternum, clavicle, scapula.
2. The main clinical and radiological signs of fractures of the chest bones.
3. Indications and typical methods of conservative treatment of chest fractures.
4. Timing of fusion of fractures of the ribs, sternum.
5. Terms of restoration of working capacity in case of chest injuries.
6. Methods of anesthesia for fractures of vertebral bodies, transverse, spinous processes.
7. The most common methods of treatment of uncomplicated fractures of the vertebral bodies, transverse, spinous processes and injuries of the ligamentous apparatus of the spine.
8. Modern principles of orthopedic treatment of complicated spinal fractures.
9. Measures to prevent the development of pressure ulcers and contractures in patients with complicated spinal fractures.
10. Ways of social and professional rehabilitation of patients with complicated spinal injuries.
11. Features of the treatment of patients with uncomplicated spinal fractures on an outpatient basis.
12. Mechanism of injuries causing pelvic fractures.

13. Measures of emergency medical care for pelvic fractures.
14. The volume of anti-shock measures for fracture of the pelvic bones at the stages of medical care.
15. Principles of differential diagnosis of cavity bleeding and retroperitoneal hematoma.
16. Signs of damage to the bladder and genitourinary system.
17. Features of injuries of the pelvic joints in pathology of childbirth.
18. The main methods of treatment of typical fractures of the pelvic bones.
19. Complications after fractures of the pelvic bones and methods of their prevention.

Report topics:

1. Hip dislocations: classification, clinical picture, diagnostics and treatment.
2. Fractures of the femoral neck. Clinical picture, diagnostics and treatment.
3. Spinal fractures of the femur. Clinical picture, diagnostics and treatment.
4. Fractures of the diaphysis of the femur. Clinical picture, diagnostics and treatment.
5. Fractures of the distal femur. Clinical picture, diagnostics and treatment.
6. Fractures of the proximal tibia. Clinical picture, diagnostics and treatment.
7. Diaphyseal fractures of the lower leg bones. Clinical picture, diagnostics and treatment.
8. Fractures of the distal leg bones. Clinical picture, diagnostics and treatment.
9. Fractures of the talus. Clinical picture, diagnostics and treatment.
10. Calcaneus fractures. Clinical picture, diagnostics and treatment.

**Topic 5. Multiple and combined injuries. Traumatic illness.**

The purpose of the lesson is to study the processes that occur during fractures of the rib cage, damage of the chest organs and methods of their treatment.

Questions on the topic of the lesson for independent work:

1. Possibilities and scope of emergency medical care at the prehospital stage of treatment (at the scene of the accident, in an ambulance car).
2. The nature and sequence of anti-shock therapy in patients with polytrauma.
3. Features of the provision of assistance at the hospital stage of treatment.
4. Concepts and principles of traumatic disease treatment.
5. Outcomes of polytrauma. Terms of restoration of working capacity in patients who have undergone polytrauma.
6. Issues of social, professional rehabilitation of patients who have undergone polytrauma.

Report topics:

1. Multiple rib fractures. Clinical picture, diagnostics and treatment.
2. Hemothorax. Clinical picture and treatment.
3. Pneumothorax. Types, clinical picture and treatment methods.
4. Closed chest injury. Prehospital phase of medical help.
5. Chest injuries. Prehospital healthcare delivery.

**Topic 6. Orthopedics. Congenital deformities of the osteoarticular apparatus. Spinal deformities.**

The purpose of the lesson is to study the pelvic bones and spine injuries, to study processes occurring in the injured pelvic organs and treatments at the same time



Questions on the topic of the lesson for independent work:

1. Express prosthetics, its advantages and indications for carrying out.
2. The procedure for referring patients to prosthetic and orthopedic enterprises.
3. Clinic of congenital hip dislocation.
4. Treatment of congenital hip dislocation.
5. Methods of surgical treatment of congenital hip dislocation.
6. Clinic and treatment of congenital torticollis.
7. Diagnosis and treatment of syndactyly.
8. Clinic and treatment of the pterygoid scapula.
9. Clinic and treatment of Madelung's disease.
10. Classification of scoliosis.
11. Treatment of scoliosis.
12. Principles, diagnosis and treatment of posture disorders.

Report topics:

1. Pelvic fractures. Surgical methods of treatment.
2. Damage of internal organs caused by fractures of the pelvic bones.
3. Stages of medical care for pelvic fractures.
4. Uncomplicated compression fractures of the vertebral bodies.
5. Unstable spinal injuries.
6. Surgical methods for treating vertebral fractures.

### **Topic 7. Osteochondropathy. Systemic diseases and skeletal deformities. Deforming osteoarthritis. Osteochondritis of the spine.**

The purpose of the lesson is to study the features of combined injuries, diagnostic methods and the complexity of treatment.

Questions on the topic of the lesson for independent work:

1. Diagnostics and principles of treatment of osteochondropathy of the bones of the feet.
2. Congenital fragility of bones, clinical picture, diagnosis.
3. Modern classification of osteoarthritis.
4. Principles of treatment of osteoarthritis of typical localization.
5. Types of surgical interventions for deforming arthrosis.
6. Principles of outpatient treatment of arthrosis.
7. Classification of degenerative diseases of the spine.
8. Typical clinical manifestations of spinal osteochondrosis.
9. Principles of orthopedic treatment of spinal osteochondrosis.
10. Indications for surgical and conservative methods of treating osteochondrosis.
11. The main methods of surgical treatment of osteochondrosis.

Report topics:

1. Multiple bone fractures. Features of treatment.
2. Combined injury. Classification. The principles of treatment.
3. Stages of medical care for combined injuries.
4. Traumatic disease. Health care.
5. Unstable spinal injuries.
6. Surgical methods for treating vertebral fractures.

## **Topic 8. Bone tumors. Diseases and deformities of the feet. Spasmodic and flaccid paralysis.**

The purpose of the lesson is to study the features of congenital diseases of the musculoskeletal system and spinal deformities.

Questions on the topic of the lesson for independent work:

1. Clinical and radiological features of tumors.
2. Methods for the treatment of benign tumors.
3. Methods for the treatment of malignant tumors.
4. Etiology and pathogenesis of static foot deformities.
5. Methods for diagnosing moan deformities.
6. Principles of conservative and surgical treatment of foot deformities.
7. Issues of prevention of acquired foot deformities.
8. Etiology and pathogenesis of cerebral palsy.
9. Orthopedic methods of treatment of infantile cerebral palsy.
10. Clinical characteristics of poliomyelitis.
11. The main types of operations for flaccid paralysis.

### Report topics:

1. Congenital dislocation of the hip. Treatment methods.
2. Congenital clubfoot. Classification. The principles of treatment.
3. Congenital muscular torticollis. The principles of treatment.
4. Diagnostics and treatment of posture disorders.
5. Scoliotic disease. Diagnostics. Treatment.

## **Topic 9. Rehabilitation of patients with injuries and diseases of ODA**

The purpose of the lesson is to study changing features of systemic and degenerative-dystrophic diseases of the musculoskeletal system, in osteochondropathies. Methods for their diagnostics and treatment.

Questions on the topic of the lesson for independent work:

1. Principles of organization of outpatient care for traumatological and orthopedic patients.
2. The structure, functional subdivisions of the trauma center, consultative and diagnostic center.
3. Principles of differential diagnosis of orthopedic diseases and the consequences of trauma.
4. Possible terms of outpatient treatment of patients with orthopedic diseases and the consequences of trauma.
5. Indications for inpatient treatment of patients.

Report topics:

1. The clinical picture and diagnostics of osteochondropathy.
2. Deforming osteoarthritis. Classification. The principles of treatment.
3. Osteocondritis of the spine. Classification. The principles of treatment.
4. Classification of degenerative diseases of the spine. Treatment.

**Topic 10. Questions of medical examination**

The purpose of the lesson is to study the principles of diagnostics and treatment of bone tumors, foot deformities; features of deformations of the musculoskeletal system with spastic and flaccid paralysis.

Questions on the topic of the lesson for independent work:

1. Criteria for work ability, the procedure for referring patients to VTEK.
2. Features of medical and labor expertise for injuries and diseases of the musculoskeletal system.
3. Principles of spa treatment and optimal options for its use in orthopedic and traumatological patients.

Report topics:

1. Diagnostic methods for the bone tumors.
2. Treatment methods of bone tumors.
3. Conservative treatments for acquired foot deformities.
4. Orthopedic component of treatment for spastic paralysis.

**LIST OF QUESTIONS FOR THE EXAM**

1. Transport immobilization for fractures of the humerus using standard and improvised splints
2. Transport immobilization for fractures of the femur with standard and improvised splints
3. Immobilization of the cervical spine in case of injuries and diseases
4. Corset therapy for injuries and diseases of the thoracolumbar spine
5. Chenot-type corset in the treatment of scoliotic disease in childhood and adolescence
6. Principles of prescribing devices to facilitate walking in case of injuries and diseases of the musculoskeletal system
7. Principles of prescribing anti-decubitus systems to patients with forced prolonged bed rest
8. Orthoses for injuries and diseases of the hip joint in adults
9. Orthoses for injuries and diseases of the knee joint in adults
10. Orthoses for injuries and diseases of the ankle joint in adults
11. Methods of examination of traumatological and orthopedic patients.
12. Instrumental diagnostic methods in traumatology and orthopedics of the adult population
13. Instrumental diagnostic methods in traumatology and orthopedics of children and adolescents
14. Clinical, laboratory and instrumental diagnostics for injuries of the upper limb
15. Clinical, laboratory and instrumental diagnostics for injuries of the lower limb
16. Clinical, laboratory and instrumental diagnostics for fractures of the pelvic bones and injuries of the pelvic organs

17. Clinical and instrumental diagnostics for diseases and injuries of the spine
18. Principles of diagnosis in congenital pathology of the musculoskeletal system
19. General issues of diagnostics for tumors and tumor-like formations of the musculoskeletal system
20. Clinical, laboratory and instrumental diagnostics for acquired pathology of the musculoskeletal system
21. Fixation method of treatment. Indications, types of plaster casts.
22. Extension method of treatment. Types of indications. Spoke locations. Possible complications.
23. Intramedullary osteosynthesis. Indications and tools for its execution.
24. Extra bone osteosynthesis. Indications and tools for its execution.
25. Devices for external fixation. Types and their place in the treatment of injuries and diseases of the musculoskeletal system
26. Intramedullary osteosynthesis in the treatment of diaphyseal fractures of the long bones of the lower extremities
27. Endoprosthetics of large joints. Indications, contraindications. Early and late complications.
28. Pre-hospital stage of medical care for fractures of the pelvic bones
29. Tactics for fractures of the proximal humerus in adults.
30. Tactics for fractures of the proximal femur in old and senile age
31. Tactics at the prehospital stage of medical care for concomitant trauma
32. Congenital dislocation of the hip. Methods of conservative and surgical treatment
33. Congenital clubfoot. Methods of conservative and surgical treatment
34. Congenital torticollis. Methods of conservative and surgical treatment
35. Syndactyly and polydactyly. Clinic, diagnostics and surgical treatment.
36. Scoliotic disease. Etiopathogenesis. Methods of conservative and surgical treatment
37. Spastic paralysis. Etiopathogenesis. Orthopedic component of treatment.
38. Flaccid paralysis. Etiopathogenesis. Orthopedic treatment methods.
39. Diseases and deformities of the feet. Methods of conservative and surgical treatment
40. Degenerative-dystrophic diseases of the musculoskeletal system. Methods of conservative and surgical treatment
41. Acquired deformities of the musculoskeletal system. Methods of conservative and surgical treatment
42. Arthrosis. Etiopathogenesis. Methods of conservative and surgical treatment
43. Bone tumors. Methods of conservative and surgical treatment
44. Tumors of cartilage tissue. Methods of conservative and surgical treatment
45. Fibrous osteodysplasia. Methods of conservative and surgical treatment
46. Arthrogrippus. Etiopathogenesis. Methods of conservative and surgical treatment
47. Osteochondrosis of the spine. Etiopathogenesis. Methods of conservative and surgical treatment
48. Static deformations of the skeleton, their characteristics Clinic, diagnostics and methods of treatment.
49. Madelung's disease. Etiopathogenesis. Methods of conservative and surgical treatment
50. Rheumatoid arthritis. Etiopathogenesis. Methods of conservative and surgical treatment
51. Osteochondropathy. Etiopathogenesis. Clinic, diagnosis and treatment.
52. Osteochondropathy of the femoral head. Clinic, diagnostics and treatment methods.
53. Koenig's disease. Clinic. Methods of conservative and surgical treatment
54. Osteochondropathy of the bones of the foot. Clinic, diagnostics. Methods of conservative and surgical treatment.
55. Fractures of the femoral shaft. Transport immobilization. Conservative and surgical treatment.
56. Fractures of the femoral neck. Clinic. Methods of conservative and surgical treatment

57. Damage to the knee joint. Clinic, diagnostics. Methods of conservative and surgical treatment.
58. Diaphyseal fractures of the leg bones. Methods of conservative and surgical treatment
59. Injury to the ankles. Dislocation fractures of the ankle. Methods of conservative and surgical treatment.
60. Damage to the bones of the foot Clinic, diagnostics. Methods of conservative and surgical treatment
61. Fractures of the clavicle, scapula. Clinic, diagnostics. Methods of conservative and surgical treatment
62. Fractures of the humerus. Clinic, diagnostics Methods of conservative and surgical treatment
63. Fractures of the bones of the elbow joint Clinical picture, diagnosis. Methods of conservative and surgical treatment
64. Fractures of the bones of the forearm. Clinic, diagnostics. Methods of conservative and surgical treatment.
65. Damage to the hand. Clinic, diagnostics. Methods of conservative and surgical treatment.
66. Fractures of the pelvic bones. Clinic, diagnostics. Methods of conservative and surgical treatment.
67. Injury of the spine Clinic, diagnostics. Methods of conservative and surgical treatment
68. Traumatic dislocations. Symptoms, diagnostics. Methods of conservative and surgical treatment.
69. Dislocation of the shoulder. Classification. Clinic, diagnostics. Methods of conservative and surgical treatment
70. Traumatic illness. Periods. Tactics of conservative and surgical treatment
71. Trauma to the chest. Hemo- and pneumothorax. Clinic, diagnostics Methods of conservative and surgical treatment.
72. Bleeding. Classification, diagnostics. Ways to temporarily stop bleeding
73. Wound infection. Types of wound infection, its prevention at the stages of medical evacuation.
74. Anaerobic infection. Clinic, diagnostics and treatment at the stages of medical evacuation.
75. Tetanus. Etiopathogenesis. Clinic, diagnostics and treatment at the stages of medical evacuation.

## **EDUCATIONAL-METHODICAL SUPPORT OF THE DISCIPLINE**

### **a) List of recommended literature**

#### **Main literature:**

Meir T. Marmor. Decision Making in Orthopaedic Trauma Edition: First edition. New York : Thieme. 2017. eBook.

<https://search.ebscohost.com/login.aspx?direct=true&db=e600xww&AN=1704040&site=ehost-live&scope=site>

#### **Additional literature:**

1 Лашковский В. В. Traumatology and orthopedics = Травматология и ортопедия : сборник тестов для студентов факультета иностранных учащихся с английским языком обучения (специальность 1-79 01 01 «Лечебное дело») : Tests for students of faculty for international students with English language of study (speciality 1-79 01 01 «General Medicine») / В. В.

Лашковский, А. Г. Мармыш, Г. А. Кошман. - Гродно : ГрГМУ, 2019. - 61 с. - ISBN 9789855950852. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <https://www.books-up.ru/ru/book/traumatology-and-orthopedics-12069221/>

**2 Fridun Kerschbaumer; Kuno Weise; Carl Joachim Wirth. Operative Approaches in Orthopedic Surgery and Traumatology Edition: 2nd edition. Stuttgart : Thieme. 2015. eBook.**

<https://search.ebscohost.com/login.aspx?direct=true&db=e600xww&AN=975416&lang=de&site=ehost-live&scope=site>

## **b) Professed data base, directory and search systems professional databases in Russian:**

### **1. Electronic library systems:**

1.1. Digital educational resource IPRsmart : electronic library system : site / LLC Company "IPR Media". - Saratov, [2022]. – URL: <http://www.iprbookshop.ru>. - Access mode: for registered users. - Text : electronic.

1.2 YURIGHT educational platform : educational resource, electronic library : website / YURIGHT Electronic Publishing Ltd. - Moscow, [2022]. - URL: <https://urait.ru>. - Access mode: for registered users. - Text : electronic.

1.3 Database "Electronic library of technical university (EBS "Student's Consultant") : electronic library system : site / Polytehresource Ltd. - Moscow, [2022]. - URL: <https://www.studentlibrary.ru/cgi-bin/mb4x>. - Access mode: for registered users. - Text : electronic.

1.4 Physician Consultant. Electronic medical library : database : site / High School of Health Care Organization and Management - Comprehensive Medical Consulting. - Moscow, [2022]. - URL: <https://www.rosmedlib.ru>. - Access mode: for registered users. - Text : electronic.

1.5. Big medical library : electronic library system : site / Bukap Ltd. - Tomsk, [2022]. - URL: <https://www.books-up.ru/ru/library/> . - Access mode : for registered users. - Text : electronic.

1.6. EBS Lan : electronic library system : site / Lun. - Saint Petersburg, [2022]. - URL: <https://e.lanbook.com>. - Access mode: for registered users. - Text : electronic.

1.7. Znanium.com EBS : electronic library system : site / Znanium Ltd. - Moscow, [2022]. - URL : <http://znanium.com> . - Access mode : for registered users. - Text : electronic.

1.8. Clinical Collection : EBSCO Scientific Information Database // EBSCOhost : [portal]. – URL: <http://web.b.ebscohost.com/ehost/search/advanced?vid=1&sid=9f57a3e1-1191-414b-8763-e97828f9f7e1%40sessionmgr102> . - Access mode : for authorized users. - Text : electronic.

1.9. database "Russian as a foreigner" : electronic educational resource for foreign students : website / LLC Company "IPR Media". - Saratov, [2022]. - URL: <https://ros-edu.ru>. - Access mode: for registered users. - Text : electronic.

**2. KonsultantPlus [Electronic resource]:** legal reference system. / OOO "Consultant Plus" - Electronic. data. - Moscow : ConsultantPlus, [2022].

### **3. periodicals databases:**

3.1. Database of periodicals EastView : electronic journals / IVIS LLC. - Moscow, [2022]. - URL: <https://dlib.eastview.com/browse/udb/12>. - Access mode : for authorized users. - Text : electronic.

3.2. eLIBRARY.RU : scientific electronic library : site / ООО Scientific Electronic Library. - Moscow, [2022]. - URL : <http://elibrary.ru>. - Access mode : for authorized users. - Text : electronic.

3.3 Electronic library of Grebennikov publishing house (Grebinnikon) : electronic library / Grebennikov Publishing House Ltd. - Moscow, [2022]. - URL : <https://id2.action-media.ru/Personal/Products>. - Access mode : for authorized users. - Text : electronic.

**4. Federal State Information System "National Electronic Library" : electronic library : website / FGBU RSL. - Moscow, [2022]. - URL: <https://нэб.пф>. - Access mode : for scientific library users. - Text : electronic.**

**5. SMART Imagebase : EBSCO scientific information database // EBSCOhost : [portal]. - URL: <https://ebSCO.smartimagebase.com/?TOKEN=EBSCO-1a2ff8c55aa76d8229047223a7d6dc9c&custid=s6895741>. - Access mode : for authorized users. - Image : electronic.**

#### **6. Federal informational and educational portals:**

6.1. Single window of access to educational resources : federal portal . - URL : <http://window.edu.ru/> . - Text : electronic.

6.2 Russian education : a federal portal / founder FITSTO Federal State Educational Institution. - URL : <http://www.edu.ru>. - Text : electronic.

#### **7. Ulyanovsk State University educational resources:**

7.1 Ulyanovsk State University Electronic Library System : module "Electronic Library" ABIS Mega-PRO / LLC "Data Express". - URL: <http://lib.ulsu.ru/MegaPro/Web>. - Access mode : for scientific library users. - Text : electronic.

#### **1. Электронно-библиотечные системы:**

1.1. Цифровой образовательный ресурс IPRsmart : электронно-библиотечная система : сайт / ООО Компания «Ай Пи Ар Медиа». - Саратов, [2022]. – URL: <http://www.iprbookshop.ru>. – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.2. Образовательная платформа ЮРАЙТ : образовательный ресурс, электронная библиотека : сайт / ООО Электронное издательство ЮРАЙТ. – Москва, [2022]. - URL: <https://urait.ru>. – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.3. База данных «Электронная библиотека технического ВУЗа (ЭБС «Консультант студента») : электронно-библиотечная система : сайт / ООО Политехресурс. – Москва, [2022]. – URL: <https://www.studentlibrary.ru/cgi-bin/mb4x>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.4. Консультант врача. Электронная медицинская библиотека : база данных : сайт / ООО Высшая школа организации и управления здравоохранением-Комплексный медицинский консалтинг. – Москва, [2022]. – URL: <https://www.rosmedlib.ru>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.5. Большая медицинская библиотека : электронно-библиотечная система : сайт / ООО Букап. – Томск, [2022]. – URL: <https://www.books-up.ru/ru/library/> . – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.6. ЭБС Лань : электронно-библиотечная система : сайт / ООО ЭБС Лань. – Санкт-Петербург, [2022]. – URL: <https://e.lanbook.com>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.7. ЭБС Znanium.com : электронно-библиотечная система : сайт / ООО Знаниум. - Москва, [2022]. - URL: <http://znanium.com> . – Режим доступа : для зарегистрир. пользователей. - Текст : электронный.

1.8. Clinical Collection : научно-информационная база данных EBSCO // EBSCOhost : [портал]. – URL: <http://web.b.ebscohost.com/ehost/search/advanced?vid=1&sid=9f57a3e1-1191-414b-8763-e97828f9f7e1%40sessionmgr102> . – Режим доступа : для авториз.

пользователей. – Текст : электронный.

1.9. База данных «Русский как иностранный» : электронно-образовательный ресурс для иностранных студентов : сайт / ООО Компания «Ай Пи Ар Медиа». – Саратов, [2022]. – URL: <https://ros-edu.ru>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

**2. КонсультантПлюс** [Электронный ресурс]: справочная правовая система. /ООО «Консультант Плюс» - Электрон. дан. - Москва : КонсультантПлюс, [2022].

### **3. Базы данных периодических изданий:**

3.1. База данных периодических изданий EastView : электронные журналы / ООО ИВИС. - Москва, [2022]. – URL: <https://dlib.eastview.com/browse/udb/12>. – Режим доступа : для авториз. пользователей. – Текст : электронный.

3.2. eLIBRARY.RU: научная электронная библиотека : сайт / ООО Научная Электронная Библиотека. – Москва, [2022]. – URL: <http://elibrary.ru>. – Режим доступа : для авториз. пользователей. – Текст : электронный

3.3. Электронная библиотека «Издательского дома «Гребенников» (Grebinnikon) : электронная библиотека / ООО ИД Гребенников. – Москва, [2022]. – URL: <https://id2.action-media.ru/Personal/Products>. – Режим доступа : для авториз. пользователей. – Текст : электронный.

**4. Федеральная государственная информационная система «Национальная электронная библиотека»** : электронная библиотека : сайт / ФГБУ РГБ. – Москва, [2022]. – URL: <https://нэб.рф>. – Режим доступа : для пользователей научной библиотеки. – Текст : электронный.

**5. SMART Imagebase : научно-информационная база данных EBSCO** // EBSCOhost : [портал]. – URL: <https://ebSCO.smartimagebase.com/?TOKEN=EBSCO-1a2ff8c55aa76d8229047223a7d6dc9c&custid=s6895741>. – Режим доступа : для авториз. пользователей. – Изображение : электронные.

### **6. Федеральные информационно-образовательные порталы:**