

MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION,  
MINISTRY OF EDUCATION AND SCIENCE OF THE KYRGYZ REPUBLIC

Government-run Educational Institution of Higher Professional Education  
Kyrgyz-Russian Slavic University  
School of Medicine



## Sports medicine

### Course Outline (Module)

Assigned to the  
Academic Curriculum

Department of Medical rehabilitation and family medicine

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560001KR- General Medicine (for foreign students)

Mode of Study

**Intramural**

Total Credit Value

**2 credit points**

Course Hours 72

Scope of Testing Semesters:  
exams

including:

in-class learning 38

credits 12

individual work 33.7

Course Hours Scheduling (per semester)				
Semester Academic Year	10 (5.2)		Total	
Weeks	16			
Type of Training	AC	CO	AC	CO
Lectures	6	6	6	6
Practical Session	32	32	32	32
Including Interactive	0,3	0,3	0,3	0,3
Including int.	2		2	
Total In-class Session	38	38	38	38
Individual Work	38.3	38.3	38.3	38.3
Individual Work	33.7	33.7	33.7	33.7
Total	72	72	72	72

**The Course outline developed by:**  
cbs, docent Saralinova G.M., Usenova A.Y.

**Reviewers:**

Candidate of Medical Sciences, Associate Professor assistant professor Dj.Smanova  
Assistant professor Dzhaylobaeva K.A.



The Course Outline  
**Sports medicine**

developed in full compliance with State Educational Standards of High Professional Education of the Kyrgyz Republic.

The State Educational Standards of High Professional Education for students trained for specialty 560001 (The Ministry of Education and Science of the Kyrgyz Republic order of 30 July 2021 №1357/1)

in accordance with Academic Curriculum:  
Specialty 560001KR- **General Medicine** (for foreign students)

confirmed by KRSU Board of Academics in 28.02.2023 record № 7.

The Course Outline endorsed by  
Medical rehabilitation Department Meeting

Record of 27 January 2023 №5

Valid for: 2023-2027 academic year

The Head of Department Candidate of Medical Sciences, assistant professor Sar

**The course outline endorsed for the following academic year**

Chairman of the Educational and Methodological Board  
3 September 2016

The course outline has been revised, considered and endorsed for implementation  
in 2016-2017 Academic Year at the Staff Meeting of Medical rehabilitation Department

Record of 3 September 2016 № 1

The Head of Department **candidate of Medical sciences, assistant professor Saralnova G.M.**

## 1. COURSE OUTLINE OBJECTIVES

1.1 Formation of knowledge, skills and abilities to assess physical development and functional the state of the body of people and adolescents involved in physical education and sports, for a rational the use of physical training in sports and physical education.

## 2. PLACE OF THE COURSE IN THE EDUCATIONAL PROGRAM

Educational Program	B1. B
Units:	
<b>2.1</b>	<b>Students' Preliminary Training Requirements:</b>
2.1.1	Hospital therapy
2.1.2	Traumatology orthopedics
2.1.3	Hospital surgery
2.1.4	Clinical biochemistry
2.1.5	Neurology, medical genetics, neurosurgery
2.1.6	Pathological anatomy
2.1.7	Pathophysiology, clinical pathophysiology
2.1.8	Topographic anatomy and operative surgery
2.1.9	Biochemistry
2.1.10	Normal physiology
2.1.11	Anatomy
2.1.12	Hospital Pediatrics
2.1.13	Faculty Pediatrics, Endocrinology
2.1.14	Infectious diseases
<b>2.2.</b>	<b>Course Units and Practical Sessions imposing the prior Proficiency</b>
2.2.1	Knowledge of this discipline will help the student to prescribe adequate physical activity and correctly give recommendations for choosing a kind of sport

## 3. STUDENTS' COMPETENCIES RESULTING FROM THE COURSE UNIT (MODULE)

PC-5: readiness to collect and analyze patient complaints, data from his anamnesis, examination results, laboratory, instrumental, pathological and anatomical and other studies in order to recognize the condition or establishing the presence or absence of a disease

### Knowledge:

Level 1	<ol style="list-style-type: none"> <li>1. Fundamentals of medical control over for athletes and sportsman</li> <li>2. Methods and means of monitoring the health status of people involved in physical education or sports.</li> <li>3. Types of medical examination.</li> <li>4. Rules of medical supervision at medical training sessions and competitions.</li> </ol>
Level 2	<ol style="list-style-type: none"> <li>1. Characteristic features of physical development and functional state of the body athletes and sportsman.</li> <li>2. Methods for assessing the level of physical development of athletes and athletes.</li> <li>3. Definition, purpose, classification and interpretation of functional tests.</li> </ol>
Level 3	<ol style="list-style-type: none"> <li>1. Features of sports injuries and pathological conditions in athletes.</li> <li>2. Classification and characteristics of the most common diseases in athletes.</li> <li>3. Indications and contraindications for sports and physical education</li> </ol>

<b>Skills:</b>	
Level 1	1. Conduct medical and pedagogical observation. 2. Assign basic and additional research methods.
Level 2	1. Assess anthropometric indicators using the index method. 2. Assess the results of functional tests.
Level 3	1. Assess the influence of physical exercises on the organism of those who go in for physical culture or sports. 2. To identify pathology, pre-pathological condition or overtraining in athletes or Sportsman. 3. Draw up a medical opinion and determine the medical group.
<b>Expertise:</b>	
Level 1	1. Skills of collecting general and sports history. 2. Skills in conducting a clinical examination of an athlete or sportsman.
Level 2	1. Assess anthropometric indicators using the index method. 2. Assess the results of functional tests.
Level 3	1. Skills of conducting a comprehensive examination of a physical cultured or athlete. 2. Skills in the design of a medical control card.

### Final Students' Competences

<b>3.1</b>	<b>Knowledge:</b>
3.1.1.	Fundamentals of medical control over young athletes and people involved in physical education and sports.
3.1.2	Mechanisms of the influence of physical activity on the formation of the body of a young athlete.
3.1.3	The complex of functional and morphological properties of an organism that determine its physical legal capacity.
3.1.4	Methods for assessing the level of physical development and recommendations for choosing the optimal motor mode for a young athlete.
3.1.5	Criteria for allocation to medical groups, terms of exemption from physical education or sports after various diseases and injuries.
3.1.6	Fundamentals of medical supervision in training sessions and competitions.
3.1.7	Indications and contraindications for sports and physical education.
3.1.8	Features of sports injuries and pathological conditions in young athletes, preventive measures.
3.1.9	Modern means of restoring physical performance.
3.1.10	Requirements of sanitary and hygienic supervision to the places of training and competitions.
3.1.11	The principles of the organization of medical and physical training service.
<b>3.2</b>	<b>Skills:</b>
3.2.1	Determine the goals and objectives of physical education, sports and physical culture and fitness training for harmonious personality development and health promotion.
3.2.2	Conduct a comprehensive medical examination (assess physical development, functional state, collect and evaluate an anamnesis of physical activity) in order to prescribe the necessary regime of physical workouts.
3.2.3	Apply modern methods, techniques, technical means of sports medicine.
3.2.4	Conduct a comprehensive assessment of the physical condition, draw up a medical report and distribute to medical groups for physical education or sports.
3.2.5	Use the knowledge gained to form a healthy lifestyle among the population and the need for regular physical education and sports activities.
3.2.6	Justify the optimal training and competition regimen and correct the training

	process.
3.2.7	To assess the effect of physical exercises on the body of those involved, taking into account age, gender, functional opportunities and health conditions
3.2.8	To carry out the prevention of pre-pathological conditions and overloads in young athletes and health improving physical culture.
3.2.9	Use the knowledge gained about the requirements of sanitary and hygienic supervision for young athletes, places conducting trainings and competitions.
<b>3.3</b>	<b>Expertise:</b>
3.3.1	Skills in conducting medical and pedagogical observations.
3.3.2	Physical development research methods (somatoscopy, anthropometry).
3.3.3	Methods for assessing physical development (indices, standards, correlation).
3.3.4	The technique of carrying out functional tests to assess the state of the main body systems (cardiovascular, respiratory and vegetative).
3.3.5	Skills of drawing up a medical control card of an athlete or sportsman.
3.3.6	Tactics of prescribing adequate physical activity, taking into account the individual characteristics of the athlete and health conditions.
3.3.7	Methods and means of monitoring the health status of people involved in physical culture and sports.
3.3.8	Skills in prescribing rehabilitation programs for illness or injury.
3.3.9	Methods for the prevention of pre-pathological conditions in young athletes.
3.3.10	By means of agitation and propaganda work to attract the population to physical education and sports.

4. COURSE (MODULE) STRUCTURE AND CONTENT							
Class Code	Subject Name /Type of Class/	Semester / Academic Year	Hours	Competencies	Literature	Interactive Sessions	Notes
	<b>Section 1. Fundamentals of sports medicine and medical supervision</b>					0	
1.1	Content and organization sports medicine. / Lek /	12	3	PC-5	L1.1 L2.1 L2.3 E2	0	
1.2	Fundamentals of medical supervision / Lek /	12	2	PC-5	L1.1 L2.1 L2.2 E1	0	
1.3	Content, goals, objectives and organization of sports medicine and medical supervision./Prac/	12	2	PC-5	L1.1 L2.1 L2.2 E2	0	
1.4	Familiarization with the diagrams medical examination engaged in physical education and sports. Features of an integrated inspection (1/2 lesson is held in active form)./Prac/	12	2	PC-5	L1.1 L2.1 L2.2 L2.3 E1	1	Anthropometry. Assessment of anthropometric indicators.
1.5	Clinical examination and functional tests in sports medicine. Medical conclusion. /Prac/	12	2	PC-5	L1.1 L2.1 L2.2 E2	2	Functional tests and their assessment. Work with a

							medical control card.
1.6	Medical support competitions and mass sports activities. /Prac/	12	2	PC-5	L1.1 L2.1 L2.2 L2.3 E2	0	
1.7	Organization of sports medical service. Basics of medical supervision for physical education and sports. /Prac/	12	2	PC-5	L1.1 L2.2 L2.1 E1.E2	0	
1.8	Forms of work of a doctor control. /Prac/	12	2	PC-5	L1.1 L2.1 L2.2 L2.3 E1	0	
1.9	Medical opinion and distribution to medical groups. /Prac/	12	4	PC-5	L1.1 L2.2 L2.5 L2.1 E1 E2	0	
1.10	Medical supervision of children and teenagers /IW/	12	4	PC-5	L2.1 L2.2 L2.5 L2.6 L1	0	Search work with Internet resources. Discussion, preparation of presentations, reports.
1.11	Medical supervision in the elderly and old age. /IW/	12	4	PC-5	L2.1 L2.2 E1 E2	0	Search work with Internet resources. Discussion, preparation of presentations, reports.
1.12	Medical supervision of girls and women. /IW/	12	4	PC-5	L2.1 L2.2 E1 E2	0	Search work with Internet resources. Discussion, preparation of presentations, reports.
1.13	Types of doping. Doping control in sports. /IW/	12	2	PC-5	L1.1 L2.1 L2.2 E2	0	Search work with Internet resources. Discussion, preparation of presentations, reports.
	Section 2. Fundamentals of sports pathology		2			0	
2.1	The effect of physical activity on the functional state of organs and systems in athletes. / Lek /	12	2	PC-5	L1.1 L2.1 L2.3 L2.2 E1 E2	0	
2.2	Sports injuries and morbidity in athletes. / Lek /	12	2	PC-5	L1.1 L2.1 L2.3 E2 E1	0	

2.3	Physiological characteristics the state of the body in sports activities. Functional features of cardiovascular and respiratory system in athletes. /Prac/	12	2	PC-5	L1.1 L2.1 L2.3 E1 E2	0	
2.4	Functional features nervous, endocrine system, metabolism, etc. at athletes. /Prac/	12	2	PC-5	L1.1 L2.1 L2.2 L2.3 E1 E2	0	
2.5	Sports injuries. /Prac/	12	2	PC-5	L1.1 L2.1 L2.2 E2 E1	0	
2.6	The incidence of athletes. /Etc/	12	3	PC-5	L1.1 L2.1 L2.2 E1 E2	0	
2.7	Training, overtraining. /Prac/	12	4	PC-5	L1.1 L2.1 L2.2 E1	0	
2.8	Recovery athletic productivity /IW/	12	4	PC-5	L1.1 L2.1 L2.2 L2.3 E1 E2	0	
2.9	Features and characteristics of sports disabled people. /IW/	12	4	PC-5	L2.1 L2.2 L2.3 E1 E2	0	Search work with Internet resources. Discussion, preparation of presentations, reports.
2.10	Sports injury statistics /IW/	12	4	PC-5	L2.1 L2.2 L2.3 E1 E2	0	Search work with Internet resources. Discussion, preparation of presentations, reports.
2.11	Vitaminization of athletes for different stages of training cycle. /IW/	12	4	PC-5	L2.1 L2.2 L2.3 E1 E2	0	Search work with Internet resources. Discussion, preparation of presentations, reports.
2.12	Special meals athletes. /IW/	12	4	PC-5	L2.1 L2.2 E1 E2	0	Search work with Internet resources. Discussion, preparation of presentations, reports.
2.13	Medical selection problems and orientation in sports. /IW/	12	3/7	PC-5	L2.1 L2.2 L1.1 E2	0	Search work with Internet resources. Discussion, preparation of presentations,

							reports.
2.14		12	0/3			0	
2.15	<b>Credit</b>	12	2	PC-5	L1.1 L2.1 L2.2 E2	0	

<b>5. ASSESSMENT FUND</b>							
<b>5.1. Advancement Questions and Assignments</b>							
<p>Questions to check the level of training. Knowledge:</p> <ol style="list-style-type: none"> <li>1. Definition, purpose, objectives of sports medicine. The importance of physical training and health promotion, their impact on the body.</li> <li>2. Organization of sports and medical services. Medical and physical dispensaries, offices.</li> <li>3. The history of the development of sports medicine.</li> <li>4. Physical inactivity, its effect on the body.</li> <li>5. Medical supervision. Goals and objectives, principles of organization.</li> <li>6. Content of MS, forms of work of a doctor and research methods in the field.</li> <li>7. Dispensary observation of athletes and sportsman, its main tasks, the role of medical and physical dispensary.</li> <li>8. Medical examination of people involved in physical education and sports.</li> <li>9. Anthropometry, research methods, assessment of indicators.</li> <li>10. Physical development of people involved in physical culture and sports, research methods and assessment of indicators.</li> <li>11. Classification and basic functional tests used in medical control.</li> <li>12. Contraindications to physical training.</li> <li>13. Medical characteristics of the main, preparatory and special medical groups for classes physical education.</li> <li>14. Changes in the functional state of the body of an athlete and a sportsman.</li> <li>15. General characteristics of sports injuries. Reasons for sports injuries (external and internal).</li> <li>16. Methods for the prevention of sports injuries.</li> <li>17. The role of the MS doctor in the prevention of sports injuries.</li> <li>18. Terms of release from physical education and sports after various injuries.</li> <li>19. The state of fatigue, overtraining and overstrain of an athlete.</li> <li>20. The role of sports medicine in the diagnosis of overtraining.</li> <li>21. Self-control during training and competition.</li> <li>22. Prevention and treatment of overtraining and overstrain.</li> <li>23. Characteristics of the morbidity of athletes.</li> <li>24. Acute pathological conditions.</li> <li>25. Prevention of morbidity in athletes.</li> <li>26. The role of a sports doctor MS in the diagnosis, prevention and treatment of sportsmen's morbidity.</li> <li>27. Terms of exemption from physical culture and sports after various diseases and operations.</li> <li>28. Indications and contraindications for the participation of disabled people in sports competitions.</li> <li>29. Kinds of sports of disabled people and standards.</li> <li>30. Classification of means of restoring physical performance.</li> <li>31. The use of complex preparations and vitamins at different stages of the training cycle</li> <li>32. The role of balanced nutrition in restoring the energy and plastic potential of the body athlete.</li> <li>33. Physical means of recovery.</li> <li>34. Doping and anti-doping control.</li> <li>35. Organization of medical services for sports events and competitions.</li> <li>36. Sanitary and hygienic control over the places and conditions of physical education and sports.</li> </ol>							

Tasks to check the level of training Skills and Expertise:

1. Demonstrate the collection of a sports history.
2. Demonstrate the technique of assessing the indicators of anthropometric studies.
4. Demonstrate the technique of conducting a test with a dosed physical activity to determine functional state of the cardiovascular system and evaluate the results.
5. Demonstrate the technique of conducting a test to assess the functional state of the respiratory system and evaluate the results.
6. Demonstrate the technique of conducting a test to study the state of the autonomic nervous system and evaluate results.
7. Draw up a medical opinion based on the results of examinations of persons involved in physical culture and sports, and distribute them to medical groups
8. Draw up a medical checklist.
9. Demonstrate the skills of calculating the density of the lesson and constructing the physiological curve of the lesson in the process physical training.
10. Assess the degree of fatigue and determine the effectiveness of the training process.
11. Draw up a complex of rehabilitation programs for diseases or injuries.

### **5.2. Course Papers Themes**

Coursework is not required by the curriculum.

### **5.3. Assessment Fund**

Questions and tasks for current control in paragraph 5.1

**CONTROL QUESTIONS TO CREDIT:**

1. Definition, purpose, objectives of sports medicine.
2. Organization of sports and medical services.
3. Organization of medical and physical dispensaries, offices.
4. The history of the development of sports medicine.
5. Medical supervision. Goals and objectives, principles of organization.
6. The value of physical training and health promotion, their impact on children's organism.
7. Physical inactivity, its effect on the body.
8. Content of MC, forms of work of a doctor and research methods in the field of MC.
9. Dispensary observation of athletes and young athletes, its main tasks, the role of medical physical culture dispensary.
10. Medical examination of children and adolescents involved in physical education and sports, its main types.
11. Anthropometry, research methods, assessment of indicators.
12. Somatoscopy, its main indicators and assessment.
13. Physical development of children and adolescents involved in physical education and sports, research methods and assessment indicators.
14. Functional tests used in medical control, their importance in assessing the functional state organism, classification of functional tests.
15. Dosed exercise tests to determine the functional state of the cardiovascular systems, evaluation of results and types of responses.
16. Samples for the functional state of the respiratory system and assessment of their results.
17. Samples for the study of the state of the autonomic nervous system and assessment of their results.
18. Medical opinion based on the results of examinations of persons involved in physical culture and sports and their distribution into three medical groups.
19. Medical characteristics of the main, preparatory and special medical groups for classes. physical education, indications for direction, the amount of permissible physical activity.
20. Medical and pedagogical observations in the process of physical training, its tasks.
21. "Physiological curve of physical education", principles of construction, assessment of the degree

of fatigue and determination

the effectiveness of the training process.

22. Sanitary and hygienic control over the places and conditions of physical education and sports, competitions.
23. Contraindications to physical training.
24. Changes in the functional state of the body during training.
25. General characteristics of sports injuries.
26. Causes of sports injuries (external and internal).
27. Methods for the prevention of sports injuries.
28. The role of a sports doctor in the prevention of sports injuries.
29. Terms of release from physical education and sports after various injuries.
30. The state of fatigue, overtraining and overstrain of an athlete.
31. The role of sports medicine in the diagnosis of overtraining.
32. Self-control during training and competition.
33. Prevention and treatment of overtraining and overstrain.
34. Characteristics of the morbidity of athletes.
35. Acute pathological conditions
36. Prevention of morbidity in athletes.
37. The role of the MC doctor in the diagnosis, prevention and treatment of sportsmen's morbidity.
38. Terms of exemption from physical education and sports after various diseases and operations.
39. Indications and contraindications for the participation of disabled people in sports competitions.
40. Kinds of sports of disabled people and standards.
41. The importance of timely recovery of the body of athletes.
42. The role of the coordinated work of the doctor and the coach in planning the schedule of training and competition.
43. Classification of means of restoring physical performance.
44. The use of complex drugs and vitamins at different stages of the training cycle.
45. The role of balanced nutrition in restoring the energy and plastic potential of the body athlete.
46. Physical means of recovery.
47. Doping and anti-doping control.
48. Organization of medical services for sports events and competitions.

Abstract topics:

1. Anatomical, physiological and psychological characteristics of primary school children in the classroom physical education and sports.
2. Morpho-functional changes in the cardiovascular system in adolescents during sports.
3. Morpho-functional changes in the external respiration system in adolescents during sports.
4. Morpho-functional changes in the nervous system in adolescents during sports.
5. Medical supervision of young athletes.
6. The influence of environmental factors on the growth and development of primary school children.
7. The influence of physical exercises and stress on the mental activity of schoolchildren.
8. Hypokinesia and physical inactivity in childhood.
9. The influence of doping drugs on the child's body.
10. Prevention of injuries during physical culture and sports in children.
11. Influence of foci of chronic infection on the functional state of a young athlete, his physical performance and athletic performance.
12. The role of physical education for children with musculoskeletal disorders.
13. Violation of posture in young athletes of various specializations.
14. Disorders of the foot in young athletes of various specializations.
15. Risk factors for diseases in young athletes.
16. Terms of admission to sports after illnesses in adolescent athletes.
17. The main diseases of children of athletes associated with malnutrition.

18. The role of trace elements and vitamins in the prevention of physical overstrain in athletes of childhood.

19. The main approaches to post-exercise recovery in young athletes.

20. Physical means of restoring working capacity in athletes of children.

Requirements for the design of abstracts in the guidelines in paragraph 8.

Situational tasks for monitoring in the annex 1.

An example of a clinical challenge:

1. In an anthropometric examination of a 16-year-old schoolchild, carried out in the afternoon after lunch,

the following data were obtained: body length (170 cm), body weight (86.7 kg).

Task: Determine the body mass index (BMI) and give an interpretation of this indicator. What are the requirements for anthropometric research violated?

Sample answer: BMI = 30, which corresponds to the range of "obesity", the requirement for anthropometry is violated, the study should be carried out on an empty stomach, preferably in the morning

2. During the initial medical examination, a 10-year-old schoolchild showed signs of impaired posture.

Assignment: Which of the following sports are permissible for the examined: basketball, wrestling, skiing, heavy athletics, swimming?

Sample answer: skiing, swimming.

Test case examples in annex 2:

An example of test items for intermediate control:

1. What is not a form of medical supervision?

1. medical and pedagogical observation of students during classes and competition

2. sanitary and hygienic control over the places and conditions of the classes and sports competitions

3. Prevention of sports injuries and morbidity

4. prevention of conflict situations in the team

5. everything is correct

end

2. The term "sports medicine" includes:

1. method for determining the functional state of athletes

2. the method of observing athletes in training and competition

3. the system of medical support for all contingents

engaged in physical education and sports

4. study of the health status of athletes and athletes

5. all of the above

end

3. The purpose and objectives of sports medicine does not include:

1. Specialized treatment of highly qualified athletes

2. Promoting the effectiveness of physical education in order to improve health and improve working capacity

3. organization and implementation of medical and preventive and sanitary and hygienic measures during classes

physical education and sports

4. revealing early signs of diseases and injuries arising from irrational physical education and

sports

5. everything is correct

end

4. Mandatory scope of functional, diagnostic and laboratory tests during the initial examination the athlete does not include:

1. X-ray of the chest

2. studies of the acid-base state of blood

3. electrocardiography

4. Clinical tests of blood and urine

5. functional exercise test

end

5. There are the following medical groups of students for physical education, excluding:

1. persons with physical disabilities

2. preparatory

3. main

4. special

5. true 2 and 4

end

6. The permissible physical load for physical education in the preparatory group of students includes:

1. classes on educational programs in full

2. classes in one of the sports sections

3. classes on curriculum with gradual mastering of motor skills

4. additional activities to improve the level of physical fitness

5. there is no right answer

end

7. The special medical group includes:

1. healthy

2. having a burdened history

3. having impaired posture

4. having significant deviations in health

5. having minor deviations in health

end

8. The method of functional tests determines:

1. fitness

2. physical performance

3. sports role

4. preparedness for competitions

5. fatigue of the body

end

9. The main anthropometric indicators of physical development are:

1. stand height

2. body weight

3. the circumference of the chest

4. muscle strength

5. all of the above

end

10. For physical education, the following medical groups are distinguished:

1. strong, weakened, special

2. basic, preparatory, special

3. physically prepared, poorly physically prepared, physically unprepared

4. first, second, third

5.A, B, C

end

11. External signs of fatigue during physical work do not include:

1. violation of the technique of performing movements
2. acrocyanosis
3. dyspnea
4. hyperhidrosis
5. all of the above

end

12. At what value of the body mass index should we talk about obesity:

1. 5-15
2. 20-25
3. 23-27
4. more than 30
5. to 5

end

13. The main medical criteria for the selection of young athletes do not include:

1. health conditions
2. the functional state of the body
3. physical development of the body
4. bad habits
5. doping

end

14. Indicate what does not determine the characteristics of a person's physique:

1. the shape of the chest
2. the shape of the back
3. the shape of the abdomen
4. the shape of the hands
5. the shape of the legs

end

15. Romberg's test is an indicator of activity:

1. cardiovascular system
2. respiratory system
3. vestibular apparatus
4. neuromuscular apparatus
5. there is no right answer

end

16. At the first detection of the use of doping substances, the athlete is subjected to:

1. Disqualifications for 2 years
2. Disqualifications for 4 years
3. Disqualifications for life
4. Fine of \$ 1,000,000
5. Disqualifications for 1 year

end

17. What is not a side effect that occurs in the liver with prolonged doping?

1. disorder of the excretory function of the liver
2. hepatocytosis
3. biliary tract blockage
4. development of hepatitis, liver cirrhosis
5. development of malignant neoplasms

end

18. The negative influence of inadequate physical activity in athletes cannot manifest itself:

- 1.the development of scoliosis
2. herniated disc
- 3.myocardial dystrophy
- 4.decrease in the content of immunocompetent cells
- 5.oncological diseases

end

19. To assess the functional state of the autonomic nervous system is not used:

- 1.clinostatic test
- 2.Ashner reflex
- 3.Romberg test
- 4.orthostatic test
5. everything is correct

end

20. Genchi's test is:

1. holding the breath while inhaling
2. holding the breath on exhalation
- 3.Five times measurement of LC at 15-second intervals
4. holding the breath while inhaling after 20 squats in 30 seconds
- 5.speed of forced expiration

end

21. The results of long-term adaptation of the athlete's heart to physical activity are:

- 1.bradycardia
- 2.hypotension
- 3.myocardial hypertrophy
- 4.Moderate respiratory arrhythmia
- 5.all of the above

22. As a result of long-term adaptation of the athlete's body to physical activity:

- 1.the content of glycogen in the blood decreases
- 2.the economization of vegetative functions and metabolism occurs
- 3.increases lactate content in muscles
- 4.the functional capabilities of the body increase and the content of ATP and glycogen in skeletal muscles increases
5. true 2 and 4

end

23. The mechanism of fatigue of an athlete's body during muscular activity consists mainly in:

- 1.disruption of the central regulation of muscle activity
- 2.Overstrain of the cardiovascular system
- 3.Local changes in the muscular system
- 4.central nervous and humoral mechanisms
- 5.there is no right answer

end

24. The "internal" causes of sports injuries do not include:

- 1.the state of fatigue
- 2.changes in the functional state of the athlete's body caused by a break in classes or illness
- 3.disorder of the biomechanical structure of movements
- 4.performance in hot and frosty weather
- 5.insufficient physical fitness of an athlete to perform this type of exercise

end

25. To prevent sports injuries, you should not:

1. to timely carry out medical and medical-pedagogical control over the state of health and physical fitness of athletes
  2. to carry out sanitary and educational work with athletes
  3. to improve the physical and technical training of athletes
  4. take drugs that stimulate the activity of the central nervous system
  5. observe the hygiene of exercise and exercise sites
- end

Forms of current control of knowledge:

- interview (verbally or written),
- situational tasks,
- assessment of practical skills,
- registration of a medical control card

Final control form:

- credit.

#### **5.4. List of Assessment Tools**

Verbally and written interview.

Test tasks.

Protection of the abstract.

Protection of the presentation.

Situational task solution.

Registration of a medical control card.

Credit.

Assessment scales by types of assessment tools are in ANNEX 3.

### **6. COURSE (MODULE) METHODOLOGICAL AND INFORMATIONAL SUPPORT**

#### **6.1 Recommended Reading**

##### **6.1.1 Required Reading List**

	Authors, Compilers	Title	Book publisher, Year
L 1.1	C. Madden.	Netter's Sports Medicine	2010

  

	Authors, Compilers	Title	Book publisher, Year
L2.1	Jennifer L., Deborah..	Foundations of Physical Education, Exercise Science and Sport	2018
L2.2	Domhnall MacAuley, Thomas Best	Evidence-Based Sports Medicine, 2nd Edition	2007
L2.3	Mark Harries	Oxford Textbook of Sports Medicine	1994

#### **6.3.1 Competence-based Educational Technologies**

6.3.1.1	Competence-based educational technologies
6.3.1.2	Traditional educational technologies - technologies focused on the communication of knowledge and ways actions transmitted to students in a finished form and intended for reproductive assimilation: lectures, seminars.
6.3.1.3	Innovative educational technologies - technologies aimed at forced activity the student and the formation of systems thinking: discussions, role-playing games, analysis of situational tasks.
6.3.1.4	Information educational technologies - independent use of computer technology for developing the ability to work with information: reports, abstracts.

#### **6.3.2 List of Information Reference Systems and Software**

6.3.2.1	Electronic library of KRSU <a href="http://www.lib.krsu.edu.kg">http://www.lib.krsu.edu.kg</a> <a href="http://www.hsr-journal.com">www.hsr-journal.com</a>
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<b>7. COURSE (MODULE) LOGISTICS</b>	
7.1	Lectures and practical classes are held on the basis of the Department of Medical Rehabilitation of KRSU. For classes are available: exercise therapy hall, 3 study rooms, as well as a computer, 2 laptops and a multimedia installation.
7.2	At the department on the subject of sports medicine there are diagrams of medical control cards and handouts(formulas, graphs) on the processing of anthropometric indicators.
7.3	Equipment of the educational process for the section of medical control:
7.4	1. Height meter.
7.5	2. Medical scales.
7.6	3. Dynamometers.
7.7	4. Centimeter tapes.
7.8	5. Spirometers.
7.9	6. Tonometers.
7.10	Also, for the implementation of the educational process in the discipline, the department has furniture: tables (6 pcs.), chairs (8 pcs.), cabinets (2 pcs.) bookcase (3 pcs.), desks (20 pcs.), couches for holding functional tests (4 pcs.).
7.11	The department has created a small library for independent work of students, which has necessary literature for the course of sports medicine. In addition, the electronic library of the department has modern editions of educational literature

<b>8. COURSE (MODULE) PROFICIENCY METHODOLOGICAL GUIDELINES (FOR STUDENT)</b>
<p>Technological maps of the discipline in ANNEX 5</p> <p><b>MODULAR DISCIPLINE CONTROL INCLUDES:</b></p> <ol style="list-style-type: none"> <li>1. Current control: assimilation of educational material in classroom lessons (lectures, practical, including attendance and activity are taken into account) and the fulfillment of mandatory tasks for independent work.</li> <li>2. Mid-term control: checking the completeness of knowledge and skills on the material of the module as a whole. Execution of modular control tasks are carried out in writing and is a mandatory component of modular control.</li> <li>3. Intermediate control - a completed documented part of an academic discipline - a set of closely related credit modules.</li> </ol> <p><b>BASIC REQUIREMENTS FOR INTERMEDIATE CONTROL</b></p> <p>When showing up for the test, students are required to have with them grade books, which they present to the teacher at the beginning offset.</p> <p>The teacher is given the right to place a test without a survey, for those students who scored more than 60 points for current and midterm controls.</p> <p>Intermediate Control Assessment: - 20 -30 points - test items to check the level of training KNOWLEDGE,SKILLS,EXPERTISE</p> <p><b>BASIC REQUIREMENTS FOR RUNNING CONTROL</b></p> <p>To understand the material and to master it qualitatively, the following sequence of actions is</p>

recommended:

1. After listening to the lecture and finishing the training sessions, in preparation for the next day's classes, you must first review and think over the text of the lecture
2. During the week, choose a time to work with the recommended literature.
3. When preparing for the next day's practical exercises, you must first read the basic concepts and approaches on the topic of homework. When performing an assignment, you must first understand what is required in it, what is the theoretical the material needs to be used, to outline a solution plan.
4. To prepare for practical exercises and perform independent work, you must first read basic concepts and approaches to the topic of the assignment. It is recommended to use the discipline guidelines, lecture notes, recommended literature.
5. In preparation for intermediate and midterm controls, you need to study the theory: definitions of all concepts and approaches to assessment until the state of understanding the material and its independent presentation. When solving problems, always it is necessary to be able to qualitatively interpret the outcome of the decision.
6. Working off missed classes. Control over the assimilation of the material of the discipline curriculum by students carried out systematically by the teacher of the department and reflected in the teacher's journal in points. Student, who received an unsatisfactory assessment on the current material, is obliged to prepare this section and answer on him to the teacher at an individual interview. In frontal teaching, a poor grade must be worked out within a month from the date of its receipt. The missed lecture should be worked out by the method oral questioning by the lecturer and preparation of an essay based on the materials of the missed lecture within a month from the day of admission. Practical training. Each lesson missed by a student is completed without fail. The tests are carried out according to the schedule of the department, agreed with the dean's office. Missed classes must be completed within 10 days from the day of admission, no more than one lessons per day. A student who has not completed the pass within the established timeframe is admitted to the next lessons only if availability of written permission of the dean or his deputy. It is not allowed to remove students who are poorly prepared for these classes from the next practical lesson. For students who have missed practical classes due to a long illness, practice should be carried out after permission of the dean's office according to an individual schedule agreed with the department. In exceptional cases (participation in interuniversity conferences, competitions, Olympiads, duty, etc.) the dean and his deputy, in agreement with the department, can release students from working off some missed classes.

#### **RECOMMENDATIONS FOR PLANNING AND ORGANIZING THE TIME REQUIRED FOR STUDY**

##### **DISCIPLINES**

It is recommended to organize the time required to study the discipline as follows:

Study of the lecture notes the day before the practical lesson - 15-20 minutes.

Study of theoretical material according to the textbook and synopsis - 1 hour per week.

Preparation for a practical lesson - 2 hours. In total a week - 3 hours 20 minutes.

#### **RECOMMENDATIONS FOR THE ORGANIZATION OF INDEPENDENT STUDENT WORK**

To understand the material and to master it qualitatively, the following sequence of actions is recommended:

1. When preparing for a practical lesson, the student must familiarize himself with the methodological development for upcoming lesson (placed on the stand of the department).
2. Review necessary material from disciplines prior to the study of normal physiology.
3. In the lecture materials, main and additional literature, find answers to questions for self-preparation.

4. During the week, select a time (1 hour) to work with the recommended literature in the library.

#### RECOMMENDATIONS FOR INDEPENDENT OUTSIDE WORK OF STUDENTS ON STUDY DISCIPLINES

The study of the theoretical part of the discipline is designed not only to deepen and consolidate the knowledge gained in the classroom classes, but also contribute to the development of students' creative skills, initiative and organization of their free time.

The student's independent work in the study of the discipline includes:

- reading recommended literature, Internet sources and mastering the theoretical material of the discipline;
- preparation for various forms of control (situational task, control work, test tasks);
- preparation and writing of abstracts;
- preparation of answers to questions on the subjects of the discipline in the sequence in which they are presented.

It is best for students to plan the time required for studying disciplines for the whole semester, while providing for regular repetition of the material. The material outlined in the lectures is necessary regularly study and supplement information from other sources of literature presented not only in discipline program, but also in periodicals.

When studying a discipline, you first need to on each topic read the recommended literature and make a short synopsis of the main provisions, terms, information, requiring memorization and being fundamental in this topic for mastering the subsequent topics of the course.

To expand knowledge of the discipline, it is recommended to use Internet resources; search various systems and use materials from sites recommended by the teacher. It is also advisable to read additional literature .When performing independent work on writing an abstract, the student must: read theoretical material in the recommended literature, periodicals, on Internet sites; creatively to process the studied material and present it for the report in the form of an abstract, illustrating with diagrams, diagrams, photographs and drawings. The texts of the abstract should be presented in a clear, simple and clear language.

#### RECOMMENDATIONS FOR PREPARING A PRESENTATION

A multimedia presentation is a type of independent work of students to create visual information tutorials made with the multimedia computer program PowerPoint. This kind of work requires coordination of the student's skills in collecting, systematizing, processing information, arranging it in the form of a collection materials, briefly reflecting the main issues of the studied topic, in electronic form.

That is, the creation of materials presentations expands the methods and means of processing and presentation of educational information, forms students computer skills.

Presentations are prepared by the student in the form of slides using the program

Microsoft PowerPoint. The role of the student: to study the materials of the topic, highlighting the main and the secondary; establish a logical relationship between theme elements; present the characteristics of the elements in a concise form; select reference signals for emphasizing the main information and display in the structure of the work; formalize the work and provide to due date. Presentation structure: You can keep the active attention of the audience for no more than 15 minutes, and, therefore, with average calculation of viewing time -

1 minute per slide, the number of slides should not exceed 15. First slide

presentation should contain the topic of the work, the surname, name and patronymic of the performer, the number of the study group, and surname, name, patronymic, position and academic degree of the teacher. On the second slide, it is advisable to present the goal and a summary of the presentation. The following slides should be divided into sections according to the points of the work plan.

The most important thing from the content of the presentation is brought to the final slide.

Presentation guidelines in Microsoft PowerPoint: For visual perception, text on slides

Presentations must be at least 18 pt, and for titles - at least 24 pt. Presentation layout should be designed

in

strict colors. The background should not be too bright or colorful. The text should be readable.

Same elements on different slides must be the same color Slide (screen) space should be maximized used, for example, by increasing the scale of the picture. In addition, whenever possible, it is necessary to

borrow top  $\frac{3}{4}$  of the slide (screen) area, since the bottom of the screen is difficult to see from the last rows. Each

the slide must contain a title. There is no full stop at the end of headings. The headers should reflect the output from information presented on the slide. Capitalizing headings should only be used if their brevity

The slide should contain no more than 5-6 lines and no more than 5-7 words in a sentence. The text on the slides should read well.

When adding pictures, diagrams, diagrams, screenshots (screenshots), you need to check the text these items for errors. Do not overload slides with animation effects - this distracts listeners from semantic content of the slide. Use the same animation effect to change slides.

Criteria for evaluation:

- correspondence of the content to the topic;
- correct structuring of information;
- the presence of a logical connection of the stated information;
- aesthetics of design, its compliance with requirements;
- the work is submitted on time

#### RECOMMENDATIONS FOR ABSTRACT WRITING

1. The topic of the essay is selected by agreement with the teacher. It is important that in the abstract: firstly, how scientific and social aspects of the problem; secondly, both general theoretical provisions and

specific examples.

2. The abstract should be based on the elaboration of several additional sources to the main literature (monographs, articles).

3. The outline of the abstract must be copyrighted (agreed with the teacher). It shows the author's approach, his

opinion, analysis, problems, as a rule, these are special monographs or articles. Recommended for use also in

popular science magazines as additional literature: "Bulletin of KRSU", "Healthcare of Kyrgyzstan", "Bulletin of KSMA", "Sports medicine: science and practice", "Physiotherapy and sports medicine", "Bulletin

sports science ", " Sports, medicine and health ", as well as newspapers specializing in medical topics.

4. All facts cited in the abstract and borrowed considerations must be accompanied by links to the source information.

5. It is unacceptable to simply compose an abstract from pieces of borrowed text. All quotes must be submitted in quotation marks indicating the source and page in parentheses. The absence of quotes and links means plagiarism and, according to established scientific ethics is considered a gross violation of copyright.

Requirements for abstract design:

The volume of the abstract can vary within 10-15 printed pages.

Main sections: table of contents (plan), introduction, main content, conclusion, list of references.

Abstract text

should contain the following sections: - title page indicating: the name of the university, department,

topic of the abstract, full name author and teacher's name. - introduction, relevance of the topic. - the main section. - conclusion (analysis of results literary search); conclusions. - bibliographic description, including Internet sources. - list literary sources must have at least 10 bibliographic titles, including online resources.

#### Text

part of the abstract is drawn up on a sheet of the following format: - top margin - 2 cm; left indent - 3 cm; right margin - 1.5 cm; bottom margin - 2.5 cm; - text font: TimesNewRoman, font height - 14, space - 1.5; - pagination - bottom sheet.

There is no number on the first page. The abstract must be done correctly in a cultured manner presentation. There must be references to the literature used, including periodicals for last 5 years.

Evaluation criteria for the abstract:

- Relevance of the research topic;
- correspondence of the content to the topic;
- depth of study of the material;
- correctness and completeness of the development of the questions raised;
- the significance of the conclusions for further practical activities;
- the correctness and completeness of the use of literature;
- compliance of the abstract design with the standard;
- the quality of the message and answers to questions when defending the abstract.

#### RECOMMENDATIONS FOR MAKING A MEDICAL CONTROL CARD (MCC).

1. MCC is drawn up in a separate student notebook in a cell in the form of sections (in accordance with the annex).

2. The 1st Section includes general information. From the 1st to the 6th paragraphs reflect passport data and information about education, profession and place of work.

3. In the 7th and 8th paragraphs it is necessary to describe:

- living conditions (type of dwelling: house, apartment; conditions: excellent, good, satisfactory or unsatisfactory);
- food regimen (hot meals, dry food, mixed; regular meals, irregular meals).

4. Section 2 is devoted to life and sports anamnesis. The history of life indicates:

- diseases in the family (diseases in the father, mother, brothers, sisters separately);
- past illnesses, operations and injuries with the indication of the date or limitation period;
- bad habits: smoking (no, yes: specify the number of cigarettes smoked per day), use alcohol (no, yes: indicate the frequency and amount of alcohol consumed).

5. The sports history lists what kinds of sports / physical culture he is or did, in for how long, for what reasons, stopped classes. Or the entry "was not engaged" is indicated.

6. In the 3rd Section, the student's anthropometric indicators are filled in with the indication of units of measurement and grade

data obtained by the method of indices. 10 indices are calculated:

1) index of proportionality of the chest and height, 2) height-weight index (Brock-Brugsch index), 3) weight-height index (Quetelet index), 4) index of general physical development (Pignet index), 5) index of vital capacity of the lungs, 6) hand force index, 7) body proportionality index, 8) body mass index, 9) ideal body weight (index Borngardt), 10) the index of functional changes. A conclusion is drawn up based on the results of each index.

7. Section 4 describes in detail the complaints (if any), the data of the external examination (including calculation of the Chizhin index) and studies of internal organs systematically (respiratory, cardiovascular, digestive, urinary-genital, endocrine, nervous systems).

8. The 5th Section includes the results of functional tests, designed in the form of graphs (Martine's test), tables

(tests of Martinet, Rosenthal, Aschner, orthostatic, clinostatic) and records (tests of Stange, Genche).

By

a conclusion is written to the results of each test carried out.

9. In the 6th section, a conclusion is written (in the form of an entry "Healthy" or a diagnosis) and the medical group is indicated.

Practical recommendations should reflect recommendations on the daily regimen, nutrition, rejection of bad habits, the amount of permissible physical activity, the timing of re-examination, consultations of appropriate specialists (if necessary).

## ANNEX 1

### **Situational tasks for current control.**

**Situational task number 1.** At the initial medical examination, the student had revealed signs of impaired posture. Which sports are listed below permissible for the examined: basketball, skiing, weightlifting?

**Situational task number 2.** What are the functional anthropometric indicators from the following are the most informative for assessing health and why: LC, body weight, chest excursion, body length, deadlift?

**Situational task number 3.** What pathological condition can be suspected if When carrying out breath-holding tests, Genchi's test was larger than Stange's test?

**Situational task number 4.** During the Martine-Kushelevsky test, it was revealed: baseline PS = 12 beats / min in 10 seconds, BP = 117/76 mm Hg PS for the first 10 seconds after load - 18 beats / min, blood pressure in the first minute of recovery 147/75 mm Hg, PS for the first 10 seconds of the second minute of recovery - 15 beats / min, blood pressure in the second minute recovery 128/72 mm Hg, PS for the first 10 seconds of the third minute of recover - 12 beats / min, blood pressure in the third minute of recovery 118/71 mm Hg, at 4 and 5 minutes recovery PS and BP did not differ from the indicators of 3 minutes recovery. What type of reaction of the cardiovascular system to a functional test?

**Situational task number 5.** What is the maximum heart rate at physical activity should be in adolescents?

**Situational task number 6.** When undergoing an in-depth medical examination at the presence of a focus of chronic infection was revealed for the young athlete. Is it possible for an athlete to continue training activities in this case?

**Situational task number 7.** An athlete has 15 years of experience in playing sports difficulties in mastering new technical and skills of complex tasks are noted tactical tasks, sports performance in general remains the same level. What pathological condition can we talk about in this situation? Answer justify.

**Situational task number 8.** Athlete 12 years old, involved in team sports, on the eve of important competitions became more irritable, aggressive, anxious, complains of obsessive thoughts that bother him (thoughts of losing a competition), there is a trend towards disease simulation. Sports performance and motivation reduced. What do the above symptoms indicate?

**Situational task number 9.** When examining a teenager showing an interest in playing sports, identified symptoms predisposing to the development of hypertensive states. What sports are advisable to recommend in this situation? Justify the answer.

**Situational task number 10.** When conducting a medical examination of a sports activity in a young athlete revealed the presence of mitral valve prolapse 2 degree. Is admission to sports allowed in this case?

**Situational task number 11.** Anthropometric examination of a 14-year-old boy.the following results were obtained: VC (3150 ml), deadlift (125 kg), BMI (23.7 kg / m<sup>2</sup>). Which sport do you recommend: basketball, swimming, wrestling, jumping in height?

**Situational task number 12.** At the initial medical examination, the teenager had revealed scoliosis of the 1st degree. What kinds of sports are acceptable for practicing in this case (basketball, wrestling, skiing, weightlifting)?

**Situational task number 13.** The examined adolescents received the following indicators: a) body length (172 cm), body weight (82 kg), LI (53 ml / kg), SI (45 kg); b) length body (175 cm), body weight (74 kg), fat (61 ml), SI (52 kg). What is the physical development of data of the surveyed?

**Situational task number 14.** To obtain permission to practice sports gymnastics, a 7-year-old girl must have the following anthropometric indicators: body length? body mass? the shape of the feet?

**Situational task number 15.** When conducting a medical examination of a sports activity in a 14-year-old subject was found to have mitral valve prolapse 2 degree. Is admission to sports allowed in this case?

**Situational task number 16.** Anthropometric examination of a 16-year-old boy the following results were obtained: Pirquet index (85%), LC (3150 ml), deadlift (125 kg), BMI (23.7kg / m<sup>2</sup>). Which sport do you recommend: basketball, swimming, wrestling, High jump?

**Situational task number 17.** Why are indicators of physical development more more informative for selection to the sports section than morphological, psychoemotional, autonomic, neurological, etc.

**Situational task No. 18.** Swimmer R. 16 years old, I category, sports experience 10 years, complaints about the moment of examination is absent, the stage of special training. When conducting a sample Rosenthal obtained the following results: LC1 = 6200ml, LC2 = 6100ml, LC3 = 6200ml, LC4 = 6300ml, LC5 = 6400ml. Evaluate the results of Rosenthal's test. Give recommendations.

**Situational task No. 19.** Sprinter V. 15 years, I category, sports experience 5 years, complaints absent at the time of examination, stage of special training. Sample result Genchi was 30 seconds. Assess the results of the Genchi test. Give recommendations.

**Situational task No. 20.** Gymnast S. 14 years old, Candidate Master of Sports, sports experience 7 years, at the time survey complaints are missing, transition period. When carrying out orthostatic Samples received the

following results: HR<sub>st.</sub> = 62 beats / min, heart rate = 84 beats / min. Evaluate the results of the orthostatic test. Give recommendations.

**Situational task No. 21.** Swimmer V. 16 years old, I category, sports experience 7 years, complaints about the moment of the survey is missing, the transitional period of preparation. Sample result Stange was 58 seconds. Evaluate the results of the Stange test. Give recommendations.

**Situational task No. 22.** Acrobat D., 14 years old, Candidate Master of Sports, sports experience 8 years, the moment of examination no complaints. When determining physical development the following results were obtained by anthropometry: body length - 165cm, body weight - 48 kg, chest circumference - 78 cm, LC - 3200 ml, carpal dynamometry - 24 kg. Evaluate the results obtained using the index method (calculate indices of Quetelet, Erisman, life, power). Give recommendations.

**Situational task No. 23.** Swimmer S. 16 years old, I category, sports experience 8 years, at the time survey complaints are missing, transition period. When conducting orthostatic test, the following results were obtained: HR<sub>st.</sub> = 62 beats / min, Heart rate stand = 68 beats / min. Evaluate the results of the orthostatic test. Give recommendations.

**Situational task No. 24.** Sportswoman (swimming) 15 years old, II category, sports experience 7 years, a week before the examination she had acute bronchitis, the stage of general preparation. When the study of indicators of external respiration, the following results were obtained: FVC = 3800 ml, FPTH = 3.2 m / sec, FPTM = 156 mm Hg. st (ECE = 1323 cal). Estimate results. Give recommendations.

**Situational task No. 25.** A 17-year-old student in physical education after physical activity (20 squats in 30 seconds) notes moderate weakness, skin the integument is pale. Pulse 16 beats in 10 seconds, BP 120/70 mm. rt. Art. 50 sec after load - pulse 12 beats in 10 seconds, blood pressure 130/70 mm Hg. Determine the type of reaction cardiovascular system for physical activity.

**Situational task No. 26.** Patient 16 years old, sports fencing (experience in sports 10 years) history - peptic ulcer, set 3 years ago. The phase of the disease at present moment - remission. Can an athlete be allowed to play sports?

**Situational task No. 27.** When undergoing a medical examination by an athlete At 14 years old, a focus of chronic infection has been identified. Is it possible to continue training activity.

**Situational task No. 28.** A 16-year-old athlete suffered from infectious mononucleosis. What research and in what time frame needs to be carried out before allowing continue training activities?

**Situational task No. 29.** Athlete 17 years old, judo (8 years old) recently celebrates deterioration of health, which is manifested by headaches and dizziness, arising mainly during physical activity. Childhood history two once fainted, the circumstances and conditions under which it happened does not remember. Solve the issue of continuing the training process.

**Situational task No. 30.** The boy, 15 years old, is engaged in wrestling. During one of torsion of the right testicle occurred. Hospitalized, testicle adjusted conservatively. Is it possible to continue with wrestling?

**Situational task No. 31.** Boy 12 years old, plays football. During the match there was a torsion of the left testicle, felt a sharp pain, but continued to play. Hospitalized after match, but tissue necrosis occurred. The testicle is removed. Available admission to classes?

**Situational task No. 32.** Basketball player, height 190 cm, 16 years old. With in-depth medical examination revealed bilateral nephroptosis stage 1. Resolve a question about admission.

**Situational task No. 33.** Cyclist, 17 years old, on planned in-depth medical examination revealed a single kidney calculus 1 cm in size. Make a decision and justify an athlete's admission to sports? **Situational task No. 34.** A 7-year-old boy with a history of epileptic seizures, age 5 years. Is it possible to admit an athlete to training and competitive activities?

**Situational task No. 35.** Child 12 years old. Is engaged in snowboarding. A year ago was unilateral fracture of the pelvic bones with violation of the integrity of the pelvic ring, with examination revealed incorrectly fused multiple vertical fractures of the pelvic bones with a violation of the whole pelvic ring. Is it possible to admit athlete to training and competitive activities? Justify your decision.

**Situational task No. 36.** The athlete underwent a strumectomy for 17 years. On the background the use of thyroid hormones in the analyzes, euthyroidism is observed. Is it possible to admit an athlete to training and competitive activities?

## ANNEX 2

### Tests for intermediate control

**1.** The term "medical supervision" includes:

- 1.method for determining the functional state of athletes
- 2.the method of observing athletes in training and competition
- 3.the system of medical support for all contingents involved in physical education and sports
4. study of the health status of athletes and athletes
- 5.all of the above

**2.** The tasks of medical supervision do not include:

- 1.Promoting the effectiveness of physical education to promote health and increasing work capacity
- 2.organization and implementation of treatment-and-prophylactic and sanitary-hygienic activities for physical education and sports
- 3.revealing early signs of disease and damage arising from irrational physical education and sports
- 4.Specialized treatment of highly qualified athletes
5. substantiation of a rational regime of exercises and trainings

**3.** What medical groups are allocated for physical education:

- 1.basic, preparatory, special

2.physically prepared, poorly physically prepared, physically not prepared

3. the first - no deviations in health; the second - with insignificant deviations in health; third - sick

4. strong, weakened, special.

**4.** Classes in physical education with students classified as special medical group, are carried out:

1.in the sports medicine dispensary

2.in the office of physiotherapy exercises in the clinic

3.in the office of medical control of the polyclinic

4. at school according to special curricula

**5.** The main areas of work of sports medicine dispensaries include:

1.organizational and methodological management of medical and preventive institutions on MS and exercise therapy

2.dispensary observation of those who go in for physical education and sports

3.organization and implementation of activities for the rehabilitation of athletes after injuries and diseases.

4.conducting anti-doping control of athletes

5.all of the above

**6.** The content of the doctor's conclusion on the dispensary observation of athletes is not includes:

1.assessment of health and functional state of athletes

2.recommendations of therapeutic and prophylactic measures

3.Recommendations for the training load regimen

4.evaluation of the degree of fitness

**7.** Professional duties of a doctor for medical supervision include:

1.medical examinations of people involved in physical education and sports

2. dispensary service of the attached contingents

3.organizational and methodological work in medical institutions and sports organizations

4.Health care of sporting events

5.all of the above

**8.** There are the following medical groups of students for physical education:

- 1.preparatory
- 2.specialized
- 3.medical
- 4.Persons with physical disabilities

**9.** The preparatory group for physical education does not include:

- 1.persons with minor disabilities in health, physically unprepared
- 2.persons without deviations in health, physically developed
- 3.Persons with deviations in the state of health, or without deviations in the state health, physically fit
4. healthy people with insufficient physical development and poor physical fitness

**10.** Permissible physical load for physical education of students basic medical group includes:

- 1.classes in the sports section
- 2.classes on curriculum physical education in full
3. passing standards and participating in competitions
- 4.all of the above

**11.** To the permissible physical load for physical education in preparatory group of students include:

- 1.classes in one of the sports sections
- 2.classes according to curricula with the gradual development of motor skills and additional activities to improve the level of physical fitness
3. lessons on educational programs in full.

**12.** To the permissible physical activity for physical education in a special group students include:

- 1.classes on the curriculum of physical education
- 2.Additional activities to improve the level of physical fitness
- 3.classes on special curricula

**13.** Students sent to exercise therapy include:

- 1.students of a special medical group
- 2.Kindergarten students
- 3.pupils with compensated mitral valve insufficiency

4.pupils with organic diseases that interfere with group studies in conditions of the educational institution

5. students with impaired posture

**14.** Physiological dilatation of the heart cavities leads to:

1.bradycardia

2.increase blood pressure

3.decreased cardiac output

4.increased cardiac output

**15.** An increase in the mass of the ventricle of the heart with hypertrophy is due to:

1.increased body fat

2.increase in the number of muscle fibers

3.increasing the size of each fiber

4.Dilated heart

**16.** The Frank-Starling law reflects:

1.Oxygen utilization in relation to the work performed

2.the ratio of the volume of the right atrium and the rhythm frequency

3.Ratio of cardiac output and peripheral resistance

4.the ability of the heart to increase the force of contraction while increasing the filling of its chambers

**17.** Hydrostatic pressure in the arteries of the head during the transition from horizontal vertical position:

1.increases

2.decreases

3.does not change

4. increases or does not change.

**18.** The contractile ability of the heart is characterized by:

1.systolic pressure

2.diastolic pressure

3.medium pressure

4.peripheral resistance

**19.** Hydrostatic pressure in the lower extremities during the transition of a person from horizontal to vertical:

- 1.decreasing
- 2.not change
- 3.first will go down and then go up
- 4.increases

**20.** The result of long-term adaptation of the athlete's heart to physical activity is not:

- 1.bradycardia
- 2.hypotension
- 3.hypertension
- 4.myocardial hypertrophy
- 5.Moderate respiratory arrhythmia

**21.** As a result of long-term adaptation of the athlete's body to physical activity:

- 1.decreases in blood glucose
- 2.the content of glycogen in muscles decreases
- 3.increases lactate content in muscles
- 4.the functional capabilities of the body increase and the content of ATP rises and glycogen in skeletal muscle

**22.** Systematic muscle training does not increase:

- 1.the body's resistance to extreme external and internal influences
- 2.content of glycogen in the liver
- 3.the performance of the body
- 4.the level of enzymes and vitamins in the body

**23.** Good functional capabilities of an athlete's body are characterized by:

- 1.fast adaptability
- 2.improving myocardial metabolism
- 3.Long-term retention of maximum load
- 4.speed up the body's recovery after exercise
- 5.all of the above

**24.** There are the following characteristics of power zones during physical activity:

1.high, moderate, low

2.maximum, submaximal, large, moderate

3.limit, large, low

4.large, medium, small

**25.** The response to physical activity in old age is not characterized by:

1.slow workability

2.extension of the recovery period after exercise

3.low functional reserves

4. fast workability

**26.** Prerequisites for a more rational blood circulation in children compared with adults are:

1. age-related narrowing of the lumen of blood vessels

2. age-related lengthening of the blood flow path

3.the presence of exposure to chronic infections

4.Large vascular lumen and shorter blood flow path

**27.** To the peculiarities of the functioning of the respiratory system during physical activity in children compared to adults include:

1.increased breathing by increasing the frequency

2.Less efficient mutual compensation of functions

3.Faster breathing recovery after exercise

4.intensification of breathing by increasing its depth

**28.** To the peculiarities of the cardiovascular system in children compared with adults do not apply:

1.more frequent heartbeats

2.lower blood pressure

3.lower oxygen pulse

4.greater minute volume of the heart

**29.** For accelerated children in comparison with children with an average level of physical development not typical:

- 1.disharmonic physical development
- 2.higher anthropometric indicators
- 3.signs of vegetative-vascular dystonia
- 4.late puberty

**30.** The period of training in children and adolescents compared with adults characterized by:

- 1.lower heart rate
- 2.shorter operating time
3. less stressful activation process

**31.** The complex of methods for determining sports professional suitability includes:

- 1.psychological methods
2. pedagogical methods
- 3.medical methods
- 4.all of the above

**32.** The main type of thermoregulation:

- 1.electric
- 2.biological
- 3.bioelectric
- 4.physical

**33.** Physical thermoregulation is not carried out by:

- 1.heat conduction and heat radiation
- 2.perspiration
- 3.convection
- 4.oxidative processes

**34.** The area of the body surface over which the body temperature is conventionally taken as indifferent - this is the area above the area:

1. liver
- 2.the apices of the lungs
3. kidney
4. hearts

5.bladder

**35.** The training effect of air baths depends on:

- 1.intensity of cold or heat stimulus
- 2.the duration of exposure to the intensity of cold or heat irritant
- 3.area of naked body surface
- 4.all of the above

**36.** Phases of the body's response to water procedures with a water temperature higher or below indifferent:

- 1.primary chills
- 2.active hyperemia
- 3.secondary chills
- 4.acrocyanosis
- 5.all of the above

**37.** The favorable phases of the body's response to water procedures include:

- 1.phase of secondary chills
- 2.phase of secondary hyperemia
- 3.phase of acrocyanosis
- 4.phase of primary chills and active hyperemia

**38.** Adverse reactions of the human body to prolonged or intense cold exposure does not apply to:

- 1.Long-term spasm of peripheral and coronary vessels
- 2.spasm of smooth muscles of the bronchi
- 3.primary chills
4. violation of the permeability of the vascular wall

**39.** Procedures for hardening the upper respiratory tract do not include:

- 1.massage of the neck and collar area
2. rubbing the face, neck, upper half of the chest

3.walking barefoot, dousing your feet

4.air baths

**40.** Contraindications for contrast washing are not:

1.Acute sinusitis

2.acute tonsillitis

3.exacerbation of chronic tonsillitis

4.chronic tonsillitis, rhinitis outside the exacerbation stage

**41.** Indications for the appointment of a contrast shower are not:

1. hardening of the body

2.neuroses

3. dyskinesia of the intestines, biliary tract.

4.neurocirculatory dystonia

**42.** Methods for assessing physical development do not include:

1.the method of anthropometric standards

2.correlation method

3.the method of standard deviations from the norm

4.the centile method

**43.** The Quetelet index takes into account:

1.height and weight

2.thigh girth

3.the thickness of the fat folds

4.bust volume

**44.** Body mass index is calculated by the formula:

1.height (cm) - weight (kg)

2.body weight (g) / height (cm)

3.body weight (kg) / height (m) <sup>2</sup>

4.height (cm) - (weight (kg) + chest circumference (cm))

**45.** When determining the body surface area, take into account:

1.height and weight

2.the circumference of the chest

3.the thickness of the fat folds

4.the height and circumference of the chest

**46.** When determining the content of subcutaneous fat in the body (according to Matejko) take into account:

1.the average thickness of skin folds

2.weight

3. growth

4.the girth of the chest

**47.** When determining the absolute muscle mass, do not take into account:

1.body length

2.the sum of the girths of the limbs

3.the thickness of the skin and fat folds on the limbs

4.body weight

**48.** The rational type of reaction to physical activity includes:

1.hypotonic

2.hypertensive

4.normotonic

5.dystonic

**49.** To determine the range of motion in the joints are used:

1.curvimeter

2.goniometer

3.caliper

4.Kyphoscoliosometer

**50.** PWC170 means:

1.work under load on a bicycle ergometer

2.work with load on the step

3. work done in 170 seconds

4. Load power at a heart rate of 170 beats / min

**51.** The clinical criteria for terminating an exercise test are:

1. reaching the maximum allowable heart rate

2. a attack of angina pectoris

3. a drop in systolic blood pressure or an increase in blood pressure more than 200/120 mmHg.

5. all of the above

**52.** Methods of medical and pedagogical observation does not include:

1. method with control physical activity

2. the method with additional loads

3. determination of the total effect of loads

4. laboratory cycle ergometry

**53.** Functional tests characterizing the function of external respiration are not relate:

1. stange test

2. Gench test

3. Tiffno-Votchal's test

4. Letunov test

**54.** Methods for studying the functional state of the central nervous system do not apply:

1. Electroencephalography

2. rheoencephalography

3. echoencephalography

4. polydynamometry

**55.** In the study of the cardiovascular system in the practice of sports medicine are used:

1. tests with a change in body position in space

2. breath-holding samples

3. pharmacological tests

4. Rosenthal's test

56. The minimum heart rate when doing wellness physical culture, necessary for the development of the quality of general endurance:

1.80-90 bpm

2.100-110 bpm

3.120-130 beats / min

4.130-140 bpm

5.140-150 bpm

57. Physician control over physical education in preschool institutions is carried out in forms:

1.medical examination with health assessment

2.medical and pedagogical observations of physical education lessons and outdoor games

3.sanitary control over the places of carrying out physical training

4.Sanitary education among staff and parents

5.all of the above

58. The main physical culture group in preschool institutions is made up of children:

1.without deviations in health or with minor deviations in sufficient physical fitness

2.having slight deviations in health status or with insignificant deviations without sufficient physical fitness

3.having significant deviations in the state of health, permanent or temporary character in compensation

4.having significant deviations in the state of health of the stage of decompensation

59. The optimal frequency of engaging in cyclic exercises for health improvement physical training:

1.1 - 2 times a week

2. 3-4 times a week

3.5 - 6 times a week

4.6-7 times a week

60. The tasks of medical and pedagogical observations in physical education lessons in preschool institutions are:

1.evaluation of the correctness of the methodological structure of the lesson

2.determination of the correspondence of the load to the age of children, their functional state and physical development

3.assessment of the sanitary condition of the places where physical education is held

4.all of the above

61. The causes of sports injuries include:

1.the unsatisfactory condition of the places of employment, equipment, sports equipment, athlete's clothing and footwear

2. unfavorable sanitary and hygienic and meteorological conditions for training sessions and competitions

3. violation of the rules of medical supervision

4.all of the above

62. Mass forms of physical culture of the population include:

1.production gymnastics

2.rhythmic gymnastics

3.classes in health groups

4. health jogging

5.all of the above

63. External signs of fatigue during physical work do not include:

1.violation of the technique of performing movements

2.acrocyanosis

3. shortness of breath

4.hyperhidrosis

64. At what value of the body mass index should we talk about obesity:

1.5-12

2.20-25

3.23-27

4.more than 30

65. Features of a sports heart are:

- 1.physiological dilatation of cavities
- 2.myocardial hypertrophy
- 3.increased myocardial capillarization
- 4.all of the above

66. Requirements for functional tests:

- 1.standard
- 2.objectivity
- 3.reliability
4. reproducibility

67. To the main tasks of physical education of schoolchildren involved in special medical groups, relate:

- 1.Promoting proper physical development and posture correction
- 2.increase the physiological activity of organs and systems of the body, strengthening health
- 3.increase physical and mental performance
4. mastering basic motor skills and abilities
- 5.all of the above

68. The program of physical education of schoolchildren assigned to the special medical group, provides all of the above, except:

- 1.exercise restrictions on speed, strength and endurance
- 2.Reduction of distances in walking and running
- 3.introducing an additional section of breathing exercises
- 4.acrobatic exercises

5.expansion of the set of exercises for the education of correct posture and exercises for strengthening the muscles of the back and abdomen

69. Formation of correct posture among schoolchildren involved in special medical groups, provides:

- 1.normal functioning of internal organs
- 2.saving in energy costs during physical activity
- 3.increased efficiency
- 4.optimal functioning of the musculoskeletal system
- 5.all of the above

70. In the main part of the physical education lesson in special. medical groups use:

- 1.teaching only one of the basic types of movement
- 2.inclusion of games of average mobility for schoolchildren of the younger age group
- 3.inclusion of elements of sports games for schoolchildren of middle and senior age groups
- 4.inclusion of corrective exercises
- 5.all of the above

71. The final part of the physical education lesson in special groups has the following features:

- 1.duration 3-5 minutes
- 2.inclusion of games of low mobility in all age groups
- 3.inclusion in all age groups of slow walking
- 4.inclusion of breathing exercises
- 5.all of the above

72. To additional forms and means of physical education of schoolchildren in special medical groups include:

- 1.morning hygienic gymnastics
2. outdoor games at recess

- 3.walking and hiking
4. hardening of the body
- 5.all of the above

73. Medical and pedagogical control in the process of physical education among schoolchildren contains:

- 1.determining the correctness of the division of students into medical groups
- 2.evaluation of the hygienic conditions of the classes
- 3.evaluation of the organization and methods of conducting classes and their correction
4. study of the effect of physical exercises on the body of students
- 5.all of the above

74. Visual criteria for a small degree of fatigue after a physical education lesson expressed by all of the above, except:

- 1.skin redness
- 2.mild sweating
- 3.Multiple rapid breathing
4. noticeable shortness of breath
- 5.Clear execution of commands

75. The method of determining the physiological curve of a physical education lesson includes all listed, except:

- 1.calculating the heart rate in 10-second intervals during the lesson
2. counting the number of breaths in 10-second intervals during the lesson
- 3.mark on the heart rate graph after each part of the lesson
4. marks on the graph of the duration of each part of the lesson
- 5.graphic depiction of the physiological curve of the lesson

76. For the development of physical quality of general endurance are used:

- 1.Cyclic exercises
- 2.acyclic exercises
3. ideomotor exercises
4. ordinal exercises

77. Life index is calculated by the formula:

- 1.weight (g) / height (cm)
- 2.LC (ml) / weight (kg)
- 3.weight (kg) / height (m) <sup>2</sup>
4. LC (l) / weight (kg)

78. Types of influences used during testing:

- 1.exercise
- 2.changing the position of the body in space
- 3.straining
- 4.changing the gas composition of the inhaled air
- 5.all of the above

79. Mean arterial pressure (BP) is calculated by the formula:

1. Mean BP = diastolic BP + 1/2 systolic BP
2. Mean blood pressure = diastolic blood pressure + 1/2 pulse blood pressure
3. Average blood pressure = diastolic blood pressure + 1/3 pulse blood pressure
4. Mean BP = diastolic BP + 1/3 systolic BP

80. Maximum heart rate is calculated by the formula (according to Karvonen):

- 1.190 - age
- 2.200 - age
- 3.220 - age
- 4.180 - age

81. Optimal values of heart rate (HR) during exercise health-improving orientation are within:

1.80 - 95% of the maximum heart rate for a given age

2.65 - 85% of the maximum heart rate for a given age

3.50 - 65% of the maximum heart rate for a given age

4.65 - 50% of the maximum heart rate for a given age

82. Evaluation of Letunov's test in healthy people is carried out after exercise through:

1.15 seconds

2.10 seconds

3.30 seconds

4.120 seconds

83. Methods for the study of physical development include:

1.somatосcopy

2.anthropometry

3.plantography

4.all of the above

5.kyphoscopylosometry

84. Relatively biologically inactive tissues of the body include:

1.muscular tissue

2.bone tissue

3.adipose tissue

4.neural tissue

85. Methods for determining biological age include:

1.determining the level of sexual development

2.evaluation of bone age (skeletal maturity)

3.evaluation of the dental formula

4.all of the above

86. When assessing the level of physical development by the method of correlation (regression scales) used:

1.body weight

2. standing height

3. chest circumference

4.Sitting height

87. When assessing physical development by the method of centiles to the average values of signs physical development include:

1.values between P 50 and P 91

2.values between P 10 and P 25

3.values between P 25 and P 75

4.values between P 75 and P 97

88. The following physiological forms of the chest are distinguished:

1.cylindrical

2.flattened

3.conical

4.all of the above

89. The main anthropometric indicators of physical development are:

1.stand height

2.body weight

3. chest circumference

4.all of the above

90. Medical observations of the physical education of preschool children have all the listed tasks, except:

1. strengthening the health of children
- 2.harmony of physical development
- 3.increase the resistance of the body of children to environmental factors
- 4.training young athletes
- 5.developing useful motor skills

91. The criteria for a comprehensive assessment of the health status of children include all listed, except:

- 1.the level of physical development of children
- 2.the presence or absence of diseases
- 3.the presence or absence of deviations in early development
- 4.the level of resistance of the organism
- 5.level of motor skills

92. The main way to determine the level of resistance of children with massive surveys are:

- 1.evaluation of the leukocyte formula in the clinical blood test
- 2.determination of the frequency of acute diseases for the past year before the survey
- 3.Skin thermometry
- 4.evaluation of physical fitness

93. The main medical criteria for the selection of young athletes include:

- 1.health condition
- 2.functional state of the body
- 3.physical development
4. psychological personality traits
- 5.all of the above

94. The third group of health includes children:

- 1.healthy
- 2.having a burdened history
- 3.having impaired posture
- 4.having significant deviations in the state of health, permanent or temporary character

95. It is recommended to use as functional tests in children 3-4 years old:

- 1.Physical education lesson
- 2.orthostatic test
- 3.Martine-Kushelevsky test
- 4.step test

96. Mass forms of physical culture of the population include:

- 1.production gymnastics
- 2.rhythmic gymnastics
- 3.classes in health groups
4. health jogging
- 5.all of the above

97. The purpose of medical control over those engaged in mass forms of physical culture is not:

- 1.determination of health and physical development
2. development of a rational training methodology
- 3.organization of regular medical examinations
- 4.control of sanitary and hygienic conditions of physical education
- 5.Promoting the effective conduct of physical education and sports with individuals different age and gender

98. The forms of industrial gymnastics include all of the above, except:

1. Introduction gymnastics
2. physical pause
3. physical education
4. wellness jogging
5. micro pauses of active rest

99. Visual criteria for the average degree of fatigue after a physical education lesson expressed:

1. significant redness of the skin
2. severe sweating
3. rapid breathing
4. impaired coordination of movements
5. all of the above

100. The duration of morning hygienic exercises for children 5-6 years old should not exceed:

1. 5-6 minutes
2. 6-8 minutes
3. 8-10 minutes
4. 12-15 minutes
5. 10-12 minutes

101. Genchi's test is:

1. holding the breath while inhaling
2. holding the breath while exhaling
3. Five times measurement of LC at 15-second intervals
4. holding the breath while inhaling after 20 squats in 30 seconds

102. The indirect (caliperometric) method for determining body composition is based on:

1. weighing a person immersed in water
2. determining body density
3. measuring the thickness of skin and fat folds
4. determining body volume

103 Values of the Ruffier index corresponding to good physical performance:

1. less than 3
2. 4 to 6
3. from 7 to 10
4. from 10 to 15

104. Martinet-Kushelevsky test includes:

1. 20 squats in 30 seconds
2. 30 squats in 45 seconds
3. Running in place at the maximum pace for 15 seconds
4. Running in place at maximum pace for 30 seconds

105. Rosenthal's test is:

1. holding the breath while inhaling
2. holding the breath while exhaling
3. Five times measurement of LC at 15-second intervals
4. holding the breath while inhaling after 20 squats in 30 seconds

106. With a satisfactory test of Rosenthal LC:

1. increases from measurement to measurement
2. Does not change or decrease from measurement to measurement by less than 10%
3. Decreases from measurement to measurement by more than 10%
4. Decreases from measurement to measurement by more than 20%

107. A good result of the Harvard step test is in points:

1.55-64

2.65-79

3.80-89

4.90 and more

108. To assess the functional state of the autonomic nervous system is used all of the above, except:

1.clinostatic test

2.Aschner's reflex

3.Romberg's tests

4.orthostatic test

110. Ruffier's test is:

1.20 squats in 30 seconds

2.30 squats in 45 seconds

3.Running in place at the maximum pace for 15 seconds

4.Running in place at maximum pace for 30 seconds

**ANNEX 3**

**Survey rating scale (current control)**

<b>№</b>	<b>Indicator name</b>	<b>Mark (in%)</b>
1	Knowledge of the main processes of the studied subject, depth and completeness of the disclosure of the question.	0-20
2	Possession and use of specialized terminology when answering.	0-30
3	Ability to explain the essence of processes, draw conclusions and generalizations, give reasoned answers.	0-30
4	Consistency of the answer, skill answer the questions posed, express your opinion on the issue under discussion.	0-20
<b>Total points</b>		

#### **SITUATIONAL TASK EVALUATION SCALE (current control)**

<b>№</b>	<b>Indicator name</b>	<b>Mark (in%)</b>
1	Understanding the proposed specific situation	0-20
2	Ability to apply the knowledge gained in practice.	0-30
3	The ability to justify the chosen tactics of action.	0-30
<b>Total points</b>		

#### **TEST SCALE (intermediate control)**

1. One test task contains 25 closed-ended questions.
2. The questions are given ready-made answers to the choice, one correct and the rest wrong.
3. For each correct answer - 4%
4. The total score is defined as the sum of the accrued interest.
5. The accumulated amount of interest is converted into points.

When answering tests:

0-59% of questions (0-14 correct answers), then this is less than 20 points;

60-69% of questions (15-17 correct answers), then this is 20-23 points;

70-84% of questions (18-21 correct answers), then this is 24-27 points;

85-100% of the questions (22-25 correct answers), then this is 28-30 points.

### **ABSTRACT SCALE (midterm control)**

№	Indicator name	Mark (in%)
	<b>Form</b>	
1	Text according to the scheme	0-10
2	A logical and understandable transition from one part to another, and also inside parts.	0-10
	<b>Content</b>	
1	Relevance of the topic	0-10
2	Compliance with topic content	0-10
3	Depth of study of the material	0-10
4	Availability of conclusions corresponding to the topic and content main body	0-10
	<b>Registration</b>	
1	Title page	0-5
2	The text of the abstract is written according to the methodological directions.	0-5
3	Correctness and completeness of the use of literature	0-5
	<b>Abstract protection</b>	
1	Literacy of presentation and terminology of the material	0-10
2	The quality of the message and answers to questions when protecting abstract	0-10
3	Implementation of regulations	0-5
	<b>Total points</b>	

### **PRESENTATION SCALE WITH REPORT (current control)**

<b>№</b>	<b>Indicator name</b>	<b>Mark (in%)</b>
	<b>Form</b>	
1	Text according to the scheme	<b>0-10</b>
2	A logical and understandable transition from one part to another, and also inside parts	<b>0-10</b>
	<b>Content</b>	
1	Relevance to the topic	<b>0-10</b>
2	The presence of the main theme in the water part and the appeal introductory part to the reader	<b>0-10</b>
3	Development of the topic in the main part (disclosure of the main provisions through a system of arguments, supported facts, examples	<b>0-10</b>
4	Availability of conclusions corresponding to the topic and content main body	<b>0-10</b>
	<b>Presentation</b>	
1	Title page	<b>0-5</b>
2	Slide design and use of additional effects (change slides, sound, graphics)	<b>0-5</b>
3	Presentation text is short, good and ideas formed are clearly stated and structured	<b>0-5</b>
4	Slides are presented in a logical sequence	<b>0-5</b>
5	Slides are printed in note form	<b>0-5</b>
	<b>Report</b>	<b>0-5</b>
1	Correctness and accuracy of speech during defense	<b>0-5</b>
2	Answers and questions	<b>0-5</b>
3	Implementation of regulations	<b>0-5</b>
	<b>Total points</b>	

**ANTHROPOMETRIC STUDY RATING SCALE(current control)**

<b>№</b>	<b>Indicator name</b>	<b>Mark (in%)</b>
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1	Correctness of anthropometric research in accordance with the algorithm.	0-30
2	The correctness of the assessment of the results of anthropometry with using the index method.	0-30
3	The correctness of the conclusion on the physical development.	0-40

**FUNCTIONAL TRIAL EVALUATION SCALE (current control)**

<b>№</b>	<b>Indicator name</b>	<b>Mark (in%)</b>
<b>1</b>	The correctness of functional tests in accordance to the algorithm.	<b>0-50</b>
<b>2</b>	Correct interpretation of the results.	<b>0-50</b>

**SCALE OF EVALUATION OF THE MEDICAL CONTROL CARD(midterm control)**

<b>№</b>	<b>Indicator name</b>	<b>Mark (in%)</b>
1	The correctness of filling the MCC in accordance with established requirements.	0-20
2	Ability to assess anthropometric indicators, somatoscopy, functional tests and draw conclusions.	0-30
3	Consistency of judgments in determining medical group and the corresponding level of physical activity.	0-40
4	Accuracy and literacy of the card design.	0-10
	<b>Total points</b>	

**Annex 4**

**When assessing the oral answers to the test of the level of training, KNOWLEDGE are taken into account the following criteria:**

85-100%: Given a reasoned, detailed answer with the inclusion of the main material, additional literature and lectures, testifying to a solid knowledge of the subject.

Examples are given with the expression of their opinion on the problem under discussion. In response there is a clear structure, logical sequence of the essence disclosed concepts and terms.

70-84%: Given a complete, detailed answer to the questions posed, revealing solid knowledge of the topic

Used materials of lectures and main literature from by giving examples. Shown the ability to highlight essential and non-essential signs. The answer is clearly structured, consistent and logical, but one is allowed - two inaccuracies in the answer or minor errors.

60-99%: An incomplete and insufficiently detailed answer was given. Logic and consistency statements have violations. Poorly formed analysis skills, abilities express your opinion on the issue under discussion and the use of special terms. Additional literature and lecture material were not used. More than two errors in the content of the answer.

Less than 60%: Given an unsystematic, sketchy, superficial response, indicating a lack of understanding of the essence of the question or refusal to answer. Lack of consistency and consistency. Serious errors were made in the content of the answer.

**When assessing the solution of situational tasks, the following criteria are taken into account:**

85-100%: The solution to the situational problem is quite convincing. Correct and a reasonable choice of tactics of action with an exact reference to the material studied. Correct answers to all the questions posed.

70-84%: Correct and complete solution of the situational problem. Choosing the right tactics action. Minor errors were allowed in the answer. Rationale theoretical questions with additional comments from the teacher.

60-69%: The solution to the problem is fragmentary: insufficiently complete, inconsistent, with mistakes, weak theoretical justification. The choice of tactics is possible when leading questions of the teacher.

Less than 60%: The solution to the problem is completely incorrect, incomplete and inconsistent, with gross errors, without theoretical justification. Rejection of the proposed solution tasks.

**When assessing practical skills to check the level of training, SKILL the following criteria are taken into account:**

85-100%: Independent correct execution of the entire sequence of the algorithm anthropometric measurements and functional tests, accurate assessment of their results and correct drawing up of a medical opinion with full giving of the appropriate practical recommendations.

70-84%: Correct execution of the entire sequence of the algorithm for conducting and assessment of physical development and functional state. Precise definition medical group, however, some inaccuracies were made (insignificant errors) when writing practical recommendations.

60-69%: Partial execution of the sequence of the algorithm for conducting and evaluating

anthropometric measurements and functional tests. Errors were made when writing a medical opinion based on the results of a comprehensive examination, corrected by the teacher.

Less than 60%: The sequence of the algorithm for conducting somatometric and somatoscopic studies, functional tests. Wrongly done conclusions. There are gross errors in the medical opinion and level determination physical activity.

**When evaluating the design of a medical control card, the following are taken into account criteria:**

85-100%: MCC is drawn up correctly and accurately in all sections. In full performed somatometric and somatoscopic examinations, their data interpreted correctly. The conclusions drawn indicate an excellent possession of the passed material. Complete practical recommendations for choosing the nature and volume of physical activity.

70-84%: MCC is filled in accordance with the established requirements.

Anthropometric studies and functional tests in full, conclusions are drawn, however, there are inaccuracies in practical recommendations for a rational exercise regimen.

60-69%: mistakes were made in filling out the MCC, with poorly mastered skills completed functional research. Correct conclusions of the results obtained, distribution to the medical group and recommendations for the acceptable physical load given with difficulty.

Less than 60%: MCC is filled out carelessly, incorrectly, without taking into account the structure of the card, incorrect conclusions were made for assessing anthropometric indicators and results functional tests.

**When evaluating the writing of an abstract, the following criteria are taken into account:**

85-100%: The topic is fully disclosed, a brief analysis of various points of view on the problem under consideration, conclusions are formulated. All requirements for writing and defending the abstract: the volume is maintained, the requirements for external design, there are no grammatical and stylistic errors. Information in the abstract is presented competently, comprehensively, reflects the complete knowledge of the student material.

70-84%: The information presented in the abstract is fully consistent with the topic, logically systematized, but at the same time there are inaccuracies in the presentation of the material and own conclusions. The basic requirements for the abstract and its defense are met. The material is presented without grammatical and stylistic errors.

60-69%: The topic is covered in part. The information provided is inconsistent.

Factual errors were made in the content of the abstract, there are no conclusions. There are omissions in design, there is no culture of presentation, there are stylistic errors.

Less than 60%: The topic of the abstract is not disclosed, a significant misunderstanding is revealed problems or abstract not submitted

**When evaluating a presentation with a report, the following criteria are taken into account:**

85-100% - the topic is fully disclosed, conclusions are drawn, information is systematized and consistent, logically connected, the conditions of registration are met, absent errors;

76-84% - the topic is disclosed, an analysis has been carried out, not all conclusions are justified, information systematized and consistent, the conditions of registration are met, there is minor errors;

60-75% - the topic is not fully disclosed, the conclusions are not substantiated, the information is not systematized and not consistent, the conditions of registration are met in part, there is errors;

0-60% - the topic has not been disclosed, there are no conclusions, the information is not logically connected, not followed conditions of registration, there are many errors.

**When assessing the written test (for knowledge, skills and expertise) the following criteria are taken into account:**

85-100%: Given a reasoned, detailed answer with the inclusion of the main material, additional literature and lectures, testifying to a solid knowledge of the subject.

He is fluent in the methods of determining and assessing physical development and functional state.

70-84%: The correct answer was given to the questions posed, but one question was given incomplete answer. One or two inaccuracies in the answer or small mistakes were made.

60-69%: An unsystematic and insufficiently detailed answer was given. Admitted errors in the answers to each question posed.

Less than 60%: Given an unsystematic, sketchy, superficial response, indicating a lack of understanding of the essence of the question or refusal to answer. Admitted serious mistakes in the answer to each question posed.

## ANNEX 6

### Physical development indices

INDEX is a formula that can be used to assess individual anthropometric indicators and their ratios

#### 1. INDEX OF PROPORTIONALITY OF THE CHEST AND GROWTH

$\frac{\text{chest circumference, cm} \times 100}{\text{height, cm}}$
---

Options:

- 1) 50 - 55: the chest is proportional to the height;
- 2) 49 and less: narrow chest (asthenic);
- 3) 56 and more: wide chest (hypersthenic).

2. GROWTH-WEIGHT INDEX characterizes the proportionality of weight body in relation to height (Broc's index)

$\text{body weight, kg} = \text{height, cm} - 100$
--

This index is not suitable for all persons, therefore, amendments are taken into account:

- 1) if the height is 165 cm and above, then body weight kg = height cm - 105
- 2) if the height is 175 cm and above, then body weight kg = height cm - 110
- 3) if the physique is asthenic, then from the received body weight take away 10%;
- 4) if the physique is hypersthenic, then to the received body weight add 10%.

3. WEIGHT-GROWTH INDEX shows how many grams of weight falls on 1 cm of height ( Kettle index)

body weight g
height cm

Options:

- 1) the norm for men: 350 - 400 g / cm;
- 2) the norm for women: 325 - 375 g / cm;
- 3) obesity: above 500 g / cm;
- 4) low nutrition: less than 300 g / cm;
- 5) very low nutrition: less than 270 g / cm.

4. INDEX OF GENERAL DEVELOPMENT (Pignet index):

$$Li - (T + P)$$

where - L - height cm, T - chest circumference cm, P - body weight Kg

Options:

- 1) up to 9: the index is not suitable for this person;
- 2) 10-15: strong physical development;
- 3) 16-20: good physical development;
- 4) 21-25: average physical development;
- 5) 26-30: poor physical development;
- 6) 31 or more: very poor physical development.

#### 5. LUNG CAPACITY INDEX (LC):

LC ml
body weight kg

Standards (the higher the indicator, the better):

- 1) for men: not less than 65-70 ml / kg
- 2) for women: at least 55-60 ml / kg

#### 6. HAND POWER INDEX (for a stronger hand):

dynamometer index $\times$ 100%
body weight kg

Standards (the higher the indicator, the better):

- 1) for men: not less than 65-70%
- 2) for women: not less than 40-50%

#### 7. BODY PROPORTIONAL INDEX

standing height - sitting height $\times$ 100%
sitting height

Options:

- 1) 87-92%: proportional physique;
- 2) 93% or more: physique is disproportionate due to more long lower limbs;

3) 86% or less: physique is disproportionate due to more long torso.

## 8. BODY MASS INDEX (BMI)

$\frac{\text{body weight kg}}{(\text{height in m})^2}$
--

Options:

- 1) 18-27: the norm for men and women;
- 2) 17 or less: reduced nutrition;
- 3) 28-30: increased nutrition;
- 4) 31 or more: obesity.

## 9. IDEAL BODY WEIGHT (Borngardt index):

$\text{height} \times \text{chest circumference}$
$240$

10. FUNCTIONAL CHANGE INDEX characterizes the level of functioning of the circulatory system and its adaptive capacity

$\text{FCI} = 0.011 \times \text{HR} + 0.014 \times \text{SBP} + 0.008 \times \text{DBP} + 0.014 \times \text{age} + 0.009 \times \text{body weight} - 0.009 \times \text{height} - 0.27$
---

The level of functioning of the blood

resting treatment

Value

IFI, score

Satisfactory up to 2.59

Tension of adaptation mechanisms 2.60 - 3.09

Unsatisfactory 3.10 - 3.49

## Breakdown of adaptation 3.50 and higher

Note: after calculating the formula, draw conclusions for each index separately, with deviations up to 3-5% from the norm do not need to be considered.

Examples:

1) Man, height 176 cm, body weight 69 kg, asthenic physique.

Height-weight index:

$$176 - 110 = 66 \text{ kg} - 10\% (6.6 \text{ kg}) = 59.4 \text{ kg}$$

Conclusions: excess body weight in relation to height by 9.6 kg (15%)

2) Woman, height 162, body weight 58 kg, VC - 3.5 liters.

LC index:

$$3.500 = 60.3$$

58

Conclusion: LC is normal.

## Medical control card

1. Surname First name
2. Year and month of birth
3. Home address
4. Place of work
5. Profession (position)
6. Education
7. Housing conditions
8. Food regime
9. Diseases in the family
10. Postponed: a) diseases; b) transactions (date); c) injury (date);
11. Drinking alcohol
12. Smoking (number of cigarettes per day)

Sports history:

13. What kind of sport is involved
14. What time is it
15. What other sports did you do
16. What kinds of sports did you compete in?

17. Anthropometric data:

- body weight (kg)
- standing height (cm)
- sitting height (cm)
- chest circumference

Sports history:

13. What kind of sport is involved
14. What time is it
15. What other sports did you do
16. What kinds of sports did you compete in?

17. Anthropometric data:

- body weight (kg)
- standing height (cm)
- sitting height (cm)
- chest circumference

18. Evaluation of anthropometric data

19. External examination data: skin

fat deposition

musculature

condition of the hernial orifice

rib cage

back

foot

legs

20. Inspection data of internal organs:

complaints

upper respiratory tract

lungs

heart

Gastrointestinal tract

nervous system

genitourinary system

organs of vision, organs of hearing

other bodies

21. Functional tests

22. Additional examinations and expert opinions

22. Conclusion: physical development

health status

medical group

admission to classes, competitions

contraindicated

recommended

reappearance

sent to a specialist

note

Discipline Sports medicine

Field of study/specialization Pediatrics

Course/semester 6, 12

Credit units (CU) 2

<b>Title of module according to WPD</b>	<b>Type of control</b>	<b>Forms of control</b>	<b>Minimal credit points</b>	<b>Maximal credit points</b>	<b>Week of control</b>
<b>Module 1</b>					
Module 1. The basics sports medicine and medical control	Formative assessment	Interview, solving situational tasks, Practical skills (anthropometry, functional tests, work with MCC), skipping lectures and practical lessons minus 1 point	10	20	29 week
	Midterm examination	Registration of medical control card, test	10	15	
<b>Module 2</b>					
Module 2. The basics sports pathology	Formative assessment	Poll, presentation with report. Skipping lectures and practical training minus 1 point, compendium lectures plus 1 point, participation in research work plus 1 point	10	20	36 week
	Midterm examination	Abstract	10	15	
Total			40	70	
Midpoint assessment(credit)		Test	20	30	
Semester rating by discipline			60	100	