

Ministry of Science and Higher Education of the Russian Federation  
Federal State Autonomous Institution of Higher Education  
“National Research Nuclear University “MEPhI”

INSTITUTE OF GENERAL PROFESSIONAL TRAINING

DEPARTMENT OF PHYSICAL EDUCATION

APPROVED ИТС ИФИБ

Protocol No. 3.1

dated 30.08.2024

**ACADEMIC COURSE OUTLINE**

**PHYSICAL CULTURE**

Educational program track (speciality) [1] 31.05.01 General Medicine

<b>Semester</b>	<b>Labour input, credits</b>	<b>Total course academic, hours</b>	<b>Lectures, hrs.</b>	<b>Practical sessions, hrs.</b>	<b>Laboratory sessions, hrs.</b>	<b>In the form of practical studies, hrs.</b>	<b>Independent studies, hrs.</b>	<b>Independent studies monitoring, hrs.</b>	<b>Course progress, Exam/Pass-fail exam/Term</b>
2	1	36	0	14	0		18	4	PFE
4	1	36	0	14	0		18	4	PFE
Total	2	72	0	28	0	0	36	8	

## ABSTRACT

Academic discipline "Physical culture" is realized in the amount of 72 academic hours in full-time courses in the form of a methodical-practical trainings and classes in reception of control standards.

The discipline "Physical culture" includes the following sections:

- theoretical, forming world outlook system of scientific and practical knowledge and the attitude to physical culture;
- the control, defining differentiated and objective accounting of process and results of educational activity of students.

### 1. ACADEMIC COURSE GOALS AND OBJECTIVES

The objectives of the development of educational discipline "Physical culture" is the formation of physical culture of the personality.

To achieve this goal provides the following educational, educative, developmental and health problems:

- Understanding of the role of physical culture in the development of the person and its preparation for professional activities;
- Knowledge of the theoretical and practical bases of physical training and a healthy lifestyle;
- Formation of the motivational - value attitude to physical training, motivation on a healthy lifestyle, physical self-improvement and self-education, the necessity of regular physical exercise and sports;
- mastering the system of practical skills, that providing the preservation and strengthening of health, mental well-being, development and improvement of mental and physical abilities, skills and personality traits, self-determination in physical education;
- Provision of general and professional-applied physical readiness for their future profession;
- Acquisition of experience of the creative use of sports activity to achieve life and career goals.

### 2. PLACE OF THE ACADEMIC COURSE IN THE MAIN HIGHER EDUCATION CURRICULUM

Basic unit of the block 1 of main educational program

### 3. DEVELOPED COMPETENCIES AND INTENDED LEARNING OUTCOMES

Universal and/or general professional competencies:

Competency code and title	Code and title of competency-based rubrics
OIIK-3 [1] – Capable of countering the use of doping in sports and preventing it.	3-OIIK-3 [1] – Know: - the content of the concepts "doping" and "anti-doping rule violation"; - the consequences of doping use and anti-doping rule violations Y-OIIK-3 [1] – Be able to: - explain the consequences of ignoring and violating anti-doping rules in sports

	B-ОПК-3 [1] – Possess skills in: - countering the use of doping
YK-7 [1] – Capable of maintaining an adequate level of physical fitness to ensure full social and professional functioning	<p>3-YK-7 [1] – Know: - scientific and practical foundations of physical culture, prevention of harmful habits and healthy lifestyle; - principles and methods of individual exercises with various specific purposes; methods for monitoring and assessing physical fitness</p> <p>Y-YK-7 [1] – Be able to: - apply diverse means of physical culture and sports in practice for maintaining and strengthening health and psychophysical preparation; - utilize physical education means and methods for professional-personal development, physical self-improvement, and formation of a healthy lifestyle</p> <p>B-YK-7 [1] – Possess skills in: - performing individually tailored sets of health-improving and adaptive (therapeutic) physical exercises to ensure full social and professional functioning</p>

#### 4. PEDAGOGIC POTENTIAL OF THE COURSE

Pedagogic tracks/objectives	Pedagogic goals (code)
Physical education	Establishing conditions for: formation of a healthy lifestyle culture, the development of the ability to preserve and improve one's health (B8)

#### 5. ACADEMIC COURSE STRUCTURE AND CONTENT

Academic course sections, their scope, terms of study and assessment:

No.	Academic course section name	Weeks	Lectures/ Practical (seminars)/ Laboratory sessions, hrs.	Compulsory current assessment (form*, week)	Maximum grade per section**	Section assessment (form*, week)	Competency-based rubrics
	<i>2 Semester</i>						
1	Theoretical	1-12	0/6/0		20	SA-8	3-ОПК-3
2	Control (standards: 1- speed, 2- strength, 3- endurance)	11-15	0/8/0		30	SA-15	Y-ОПК-3, Y-YK-7
	<i>Totals for 2 Semester</i>		0/14/0		50		
	<b>Assessment events for 2 Semester</b>				50	PFE	B-ОПК-3, 3-YK-7, B-YK-7
	<i>4 Semester</i>						
1	Theoretical	1-12	0/6/0		20	SA-8	3-ОПК-3

2	Control (standards: 1- speed, 2- strength, 3- endurance)	11-15	0/8/0		30	SA-15	У-ОПК-3, У-УК-7
	<i>Totals for 4 Semester</i>		0/14/0		50		
	<b>Assessment events for 4 Semester</b>				50	PFE	B-ОПК-3, 3-УК-7, B-УК-7

\* – abbreviated name of assessment

\*\* – 100 maximum points per semester including a pass/fail exam and (or) an exam

Abbreviated current assessment forms and section assessment

Abbreviation	Full name
SA	Summative assessment
PFE	Pass/fail examination

## SYLLABUS

Weeks	Topics / Content	Lect., hrs.	Pr./sem., hrs.	Lab., hrs.
	<i>2 Semester</i>	0	14	0
<b>1-12</b>	<b>Theoretical</b>	0	6	0
1	<b>Methodical -organizational</b> Personnel safety instruction and acquaintance with the program of occupations of discipline "Physical culture".	All		
		0	2	0
		Online		
		0	0	0
5	<b>Theoretical occupations</b> Topic 1. Physical culture in common cultural and professional preparation of students. Topic 2. Social and biological basics of physical culture.	All		
		0	2	0
		Online		
		0	0	0
12	<b>Theoretical occupations</b> Topic 3. Bases of a healthy lifestyle of the student. Physical culture in ensuring health. Topic 4. Psychophysiological bases of educational work and intellectual activity. Means of physical culture in working capacity regulation.	All		
		0	2	0
		Online		
		0	0	0
<b>11-15</b>	<b>Control (standards: 1- speed, 2- strength, 3- endurance)</b>	0	8	0
11 - 12	<b>Practical occupation</b> Preparation for completing of control tests on the general physical fitness.	All		
		0	4	0
		Online		
		0	0	0
12 - 15	<b>Reception of control standards</b> Passing the test (obligatory) in the general physical fitness.	All		
		0	4	0
		Online		
		0	0	0
	<i>4 Semester</i>	0	14	0
<b>1-12</b>	<b>Theoretical</b>	0	6	0
1	<b>Methodical -organizational</b> Personnel safety instruction and acquaintance with the program	All		
		0	2	0

	of occupations of discipline "Physical culture".	Online		
		0	0	0
5	<b>Theoretical</b> Topic 5. The general physical and sports training in system of physical training. Topic 6. Bases of a technique of independent occupations by physical exercises.	All		
		0	2	0
		Online		
		0	0	0
12	<b>Theoretical</b> Topic 7. Sport. Individual choice of sports or systems of physical exercises. Topic 8. Features of occupations by the chosen sport or system of physical exercises.	All		
		0	2	0
		Online		
		0	0	0
<b>11-15</b>	<b>Control (standards: 1- speed, 2- strength, 3- endurance)</b>	0	8	0
11 - 12	<b>Practical occupation</b> Preparation for completing of control tests on the general physical fitness.	All		
		0	4	0
		Online		
		0	0	0
12 - 15	<b>Reception of control standards</b> Passing the test (obligatory) in the general physical fitness.	All		
		0	4	0
		Online		
		0	0	0

Abbreviated names of online options:

Abbreviation	Full name
EC	E-course
FtM	Full-text material
FtL	Full-text lectures
VM	Video materials
AM	Audio materials
Prs	Presentations
T	Tests
ERM	E-reference materials
IS	Interactive site

## 6. EDUCATIONAL TECHNOLOGIES

### ORGANIZATION OF CARRYING OUT EDUCATIONAL PROCESS.

For carrying out educational process students are distributed on educational departments: basic, special and sports.

Distribution is carried out to educational departments at the beginning of academic year taking into account a state of health (medical certificate), physical development, physical and sports fitness, interests of the student.

The students included in list of main and preparatory medical groups are enlisted in the basic educational department.

The students that are relevant by medical examination in special medical group are enlisted in special educational department. Educational groups are completed taking into account by the level of a functional condition of students. The students exempted for health reasons from a practical training

for long term are enlisted in special educational office for development of sections of the course which available to them.

Sports educational department – educational groups on sports (systems of physical exercises), are enlisted the students of all courses of the main medical group who have shown good general physical and sports fitness and desire to engage in depth one of the sports organized at university. The number of members is determined by taking into account the sports qualification, but can not exceed 15 people. Students of sports educational department fulfill obligatory requirements and standards (tests) established for the main department and in the same terms. The certain students of sports department whose have high sports qualification can be transferred to the individual schedule of occupations to the chosen sports with performance in established periods of obligatory test requirements and tests.

The directions on sports of the main educational department and section of sports educational department are defined by chair of physical training with material and regular resources.

Methodical-practical and control training is provided in curricula on all specialties, includes in the educational schedule of university on the entire period of training not less than 72 hours.

The obligatory theoretical section of the training program is stated to students on a metodiko-practical training in the logical sequence provided by the training program.

Individual and group additional classes (consultations) are given in the schedule of chair of physical training after the termination of a semester for the students who aren't coping with test requirements and also peoples who interested in deepen the knowledges and practical skills in the questions interesting them on physical culture and sport.

Control occupations provide operational, current and final information about extent of assimilation of a training material. At the end of a semester and academic year the students of all educational departments who have executed the training program pass the test on physical culture consisting their 2 sections:

- theoretical and methodical occupations, mastering methodical skills
- control, general physical training and vital skills

Practical examination requirements and tests for game sports are carried out in class hours at control competitions to which the students who were regularly attending studies and received necessary preparation are allowed.

Testing of students are accepted by teachers of educational department. The mark about testis brought in chair lists, sheets of faculty and the record book of the student.

The students who haven't passed medical examination aren't allowed to a practical training.

The students who carried according to medical examination in special medical group, having any chronic disease or poor physical development are enlisted in special educational office. Students of special department complete those sections of the program, requirements and tests which are available to them for health state. At the end of each semester they prepare papers on the subject connected with their individual deviations in a state of health. An admission condition to test exercises is the regularity of visit of studies providing physiologically and methodically justified increase of functional and motive readiness.

Content of classes in physical culture with students of special office includes:

- the improving and rehabilitation form of physical culture connected with the directed use of physical exercises as prevention, rehabilitation of diseases and restoration of the functions of an organism broken or lost owing to diseases, injuries, over fatigue and other reasons. It version is the medical physical culture which has a wide complex of the means and methods (remedial gymnastics, the dosed walking, run and other exercises) connected with kind of diseases, injuries or other

violations of functions of an organism (an overstrain, chronic exhaustion, age changes, etc.). This means are used in such modes, as "sparing", "toning", "training", etc., and individual sessions – procedures, occupations of fixed type, etc.

The main direction of rehabilitation (medical and physical) – the restoration of patient health by means of complex use of various means directed to the maximum restoration of functions of an organism, and in case of impossibility of achievement of it is development of compensatory and replaceable devices (functions);

- background types of physical culture which include hygienic physical culture.

Release of students from a practical training on physical culture according to the conclusion of the doctor can be a temporary measure. The students exempted from a practical training for the long period study methods of physical training, a technique of individual and independent occupations, independently study special literature on the instructions of the teacher. At the end of a semester they pass to the teacher test on knowledge of methodical principles of physical culture, and also perform written examination on the disease.

Taking into account requirements of the working program and the schedule of studies teachers have the right to choose the methods and tutorials which are most fully answering to their professional opportunities and providing high quality of educational process.

Teachers take full responsibility for adequate nature of the exercises offered students and providing necessary safety measures when carrying out studies.

## 7. ASSESSMENT TOOLKIT

The assessment toolkit ensures verification of the intended learning outcomes achievement (competency-based rubrics) using current, midterm and interim assessment of the course.

The link between developed competencies and their assessment is presented in the following table:

Competency	Achievement rubrics	Assessment activity (Syl 1)	Assessment activity (Syl 2)
ОПК-3	3-ОПК-3	SA-8	SA-8
	У-ОПК-3	SA-15	SA-15
	В-ОПК-3	PFE	PFE
УК-7	3-УК-7	PFE	PFE
	У-УК-7	SA-15	SA-15
	В-УК-7	PFE	PFE

### Educational achievement rubrics scales

The scale of each assessment activity varies from 0 to the maximum established point, inclusive. The final assessment of the course is performed on a 100-point scale and represents the sum of the points earned by the student in the section assessments, framework of current and interim assessment.

Sections and interim assessments are considered passed when the student achieves a minimum score equal to 60% of the maximum. The final grade is assigned only upon passing all sections and the interim assessment.

The final grade is assigned in accordance with the following scale:

Total score	Rating on a 4-point scale	Pass/fail examination	ECTS assessment
90-100	5 – « <i>excellent</i> »	« <i>pass</i> »	A
85-89	4 – « <i>good</i> »		B
75-84			C
70-74			D
65-69	3 – « <i>satisfactory</i> »		E
60-64		F	
below 60	2 – « <i>fail</i> »	« <i>fail</i> »	

An “excellent” grade indicates a deep and solid mastery of the program material by a student who presents their answers consistently, clearly, and logically, is able to closely link theory with practice, and uses materials from monographic literature in their answers.

A “good” grade corresponds to a student’s solid knowledge of the material, who presents their answers competently and to the point, without any significant inaccuracies.

A “satisfactory” grade corresponds to the basic level of mastery of the material by the student, in which the main material has been mastered, but its details have not been assimilated, the answers contain inaccuracies, insufficiently correct wording and logical inconsistencies.

A grade “pass” corresponds to at least a basic level of mastery of the program material, in which the student possesses the necessary knowledge, skills, and abilities, and is able to apply theoretical principles to solve typical practical problems.

A grade “fail” is given to a student who lacks a significant understanding of the curriculum material, makes significant errors in their answers, or fails all required assignments. These students are generally unable to continue their studies without additional classes.

## **8. ACADEMIC COURSE EDUCATIONAL, METHODOLOGICAL AND INFORMATIONAL SUPPORT**

### **CORE READING:**

1. ЭИ К48 Key Concepts in Sport and Exercise Sciences : , Cooke, Carlton B. , Kirk, David. , Flintoff, Anne. , London: SAGE Publications, 2011
2. ЭИ К41 Key concepts in sport psychology / : , Kremer, John, , London: SAGE, 2011
3. ЭИ М88 The endurance running training program for Russian and foreign students in a technical institution of higher education : The study guide, Esaulov M.N., Mosina I.N., Mosin I.V., Moscow: National Research Nuclear University МЭФІ, 2018
4. ЭИ Л 53 Лечебная физическая культура : , , Москва: ГЭОТАР-Медиа, 2014
5. ЭИ О-26 Обучение комплексу базовых боевых приемов самбо : учебное наглядное пособие, Есаулов М.Н. [и др.], Москва: НИЯУ МИФИ, 2015

6. ЭИ Ф 50 Физическая культура : , , Москва: Издательство "Феникс", 2014

7. ЭИ Ф 50 Физическая культура студента : , Дядичкина Н. С. [и др.], Красноярск: Сибирский Федеральный Университет, 2011

#### FURTHER READING:

1. ЭИ Л 53 Лечебная физическая культура и массаж : , Епифанов В.А., Москва: ГЭОТАР-Медиа, 2014

2. 796 О-26 Обучение комплексу базовых боевых приемов самбо : учебное наглядное пособие, Есаулов М.Н. [и др.], Москва: НИЯУ МИФИ, 2015

3. 57 Е80 Общая биохимия и спорт : , Ершов Ю.А., Москва: МГУ, 2010

4. 796 С73 Спорт в МИФИ и нашей жизни : , Зуев В.И. [и др.], Москва: Научтехлитиздат, 2011

5. 796 Е25 Физическая культура : учебное пособие для вузов, Евсеев Ю.И., Ростов-на-Дону: Феникс, 2014

6. 37 С85 Физическая культура и спорт в университетах: статистический и социологический анализ : , Стриханов М.Н., Савинков В.И., Москва: ЦСПиМ, 2015

#### SOFTWARE:

No special softwares is required

#### LMS AND ONLINE RESOURCES

<https://online.mephi.ru/>

<http://library.mephi.ru/>

### **9. LOGISTICAL SUPPORT**

Any special logistical support is not required

### **10. EDUCATIONAL AND METHODOLOGICAL RECOMMENDATIONS FOR STUDENTS**

Attestation of discipline "Physical culture" is carried out according to two sections of educational activity and concluding test session. The expert assessment of the teacher and an assessment of results of the corresponding tests on the developed tables acts as criterion for evaluation of success of mastering of a training material. On each of two sections the separate mark is put down.

First section. Theoretical and methodical knowledge, mastering methodical skills

Digestion of material of the section is determined by the level of mastering theoretical and methodical knowledge, the corresponding practical skills of their use on an assessment which isn't lower than 12 points from 20 greatest possible.

Second section. Completing of control standards

In this section completing of basic control tests is carried out: run of 3 km, run of 100 m, pulling up, press. For sports and basic educational department the choice of additional control tests is defined by teachers. In special educational department basic control tests are excluded, the choice of test exercises is carried out individually, taking into account medical indications of the student.

Each of obligatory control tests of physical fitness is estimated on the 10th mark scale, for successful attestation of the section it is necessary to execute a minimum in 6 points on each of three tests.

#### Examination

Following the results of a semester examination classes on which the expert gain score and the level of physical fitness of the student on the 50th mark scale with a minimum in 30 points is carried out are given.

## **11. EDUCATIONAL AND METHODOLOGICAL RECOMMENDATIONS FOR TEACHERS**

At the beginning of each semester, the instructor is required to conduct a safety briefing and check for medical clearance to ensure there are no contraindications for practical classes. The theoretical section of the course consists of lectures by the instructor and independent work by the student on assigned topics. The student must pass the assessment tests for the assessment section only after the instructor has cleared the student, provided that practical classes are regularly held and the student has a medical clearance. If a student is excused due to illness or recovery, the assessment tests are not required during this period. The instructor assigns an additional theoretical assignment, and the assessment section is counted based on the minimum grade.

Certification for the "Physical Education" course is conducted across two sections of academic activity and a final assessment. The assessment criteria for successful mastery of the course material are the instructor's expert assessment and the evaluation of the corresponding test results using developed tables. A separate grade is assigned for each of the two sections.

#### Section One. Theoretical and Methodological Knowledge, Mastery of Methodological Skills and Abilities

This section aims to provide students with a system of scientific, practical, and specialized knowledge necessary for understanding the natural and social processes that shape physical culture in society and the individual, as well as the ability to adaptively and creatively use these skills for personal and professional development, self-improvement, and the organization of a healthy lifestyle in their academic, professional, and sociocultural activities.

The content of the required topics should generally include: basic concepts and terms; leading scientific ideas; fundamental patterns, theories, principles, and provisions that reveal the essence of physical culture phenomena and the objective relationships between them; and thematic information and scientific facts that explain and shape students' beliefs.

Topic 1. Physical Culture in the General Cultural and Professional Training of Students

Topic 2. Socio-Biological Foundations of Physical Culture

Topic 3. Fundamentals of a Healthy Lifestyle for Students. Physical Education in Health

Topic 4. Psychophysiological Foundations of Academic Work and Intellectual Activity.  
Physical Education Tools in Regulating Performance

Topic 5. General Physical and Sports Fitness in the System of  
Physical Education

Topic 6. Fundamentals of Independent Physical Exercise

Topic 7. Sports. Individual Selection of Sports or Systems of  
Physical Exercise

Topic 8. Characteristics of Practicing a Selected System of Physical Exercise

Completion of this section is determined by the level of mastery of theoretical and methodological knowledge, corresponding practical skills, and the ability to use them, with a score of at least 12 points out of a maximum of 20.

#### Section Two. Completion of Test Standards

This section includes basic tests: 3 km run, 100 m run, pull-ups, and abdominal exercises. For the sports and basic education departments, the choice of additional tests (substituting for the basic ones, if necessary) is determined by the instructors. In the special education department, basic assessment tests are eliminated; the selection of testing exercises is individualized, taking into account the student's medical needs.

Each mandatory physical fitness assessment test is graded on a 10-point scale; to pass the section, a student must earn 18 points out of a possible 30.

#### Final Assessment.

At the end of the semester, assessment classes are held, during which an expert evaluates the student's academic performance and level of preparation, as well as their mastery of the discipline's competencies, on a 50-point scale with a minimum of 30 points.

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