

Ministry of Science and Higher Education of the Russian Federation
 Federal State Budgetary Educational Institution of Higher Education
Perm National Research Polytechnic University

APPROVED BY

Pro-rector for Academic Affairs

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2021



ACADEMIC COURSE WORKING PROGRAM

Academic course: Applied physical training – elective courses (module)

by sports type

(Name)

Form of education: Full-time

(Full-time /full-time – correspondence/correspondence)

Level of higher education: Bachelor's program

(Bachelor's program/specialist program/
Master's program)

Workload in hours (in credits): 328 (9)

(Hours (CU))

Training program (degree): 21.03.01 Oil and Gas Engineering

(Code and denomination of degree)

Direction: Oil and Gas Engineering

(Title of curriculum)

1. GENERAL PROVISIONS

1.1. GOALS AND OBJECTIVES OF THE COURSE

The goal of the discipline is the formation of the ability of a specially directed and selective use of physical culture, sports for psychophysical training and self-preparation for a specific professional activity.

Discipline objectives:

- the formation of a motivational-value attitude to physical culture, an attitude towards a healthy lifestyle, physical self-improvement and self-education, the need for regular exercise and sports;

- formation of a system of skills and abilities that ensure the preservation and strengthening of health, mental well-being, development and improvement of psychophysical abilities, qualities and personality traits, self-determination in physical culture and sports;

- acquiring personal experience of increasing motor and functional capabilities, ensuring general and professionally applied physical readiness for a future profession and life;

- gaining experience in the creative use of physical culture and sports activities to achieve professional and life goals;

- education of applied psychophysical and special qualities necessary in the conditions of professional activity.

1.2. STUDIED OBJECTS OF THE COURSE

Applied physical exercises and certain elements of various sports; applied sports

1.3. STARTING CONDITIONS

Unstipulated

2. PLANNED RESULTS OF THE COURSE TRAINING

Competence	Indicator's Index	Planned Results of the Course Training (to know, to know how, to master)	Indicator of Attaining Competence which the planned results of training are correlated with	Means of Assessment
1	2	3	4	5
UC-7	IA-1.UC-7	To know scientific and practical fundamentals of physical culture and healthy lifestyle; the impact of physical culture systems on improvement health, on prevention disease and bad habits; control methods,	Knows the level of requirements and level assessment principles of physical preparedness for social and professional work; ways and methods of increasing the level of	Interview

1	2	3	4	5
		assessment and correction of physical development and physical preparedness; rules and methods of planning individual lessons of different target focus.	physical human development.	
UC-7	ID-2.UC-7	To be able to apply methods and means of physical culture and sports activities; perform individually selected complexes of wellness and adaptive (therapeutic) physical education, sets of exercises; perform the simplest relaxation techniques.	Is able to assess the level of physical preparedness for subsequent professional activities; to monitor the state of his physical development and to manage its condition.	Test
UC-7	IA-3.UC-7	To master the skills of directed formation and development of the most important properties and personality traits to preserve and strengthen health, physical development and preparedness.	Masters the skills of assessment, control and management of physical development state; as well as of definitions of sufficient (comfortable) state for a full social and professional activities.	Test

3. FULL TIME AND FORMS OF ACADEMIC WORK

Form of academic work	Hours in all	Distribution in hours according to semesters						
		Number of semester						
		1	2	3	4	5	6	
1. Holding classes (including results monitoring) in the form:	328	36	72	36	72	56	56	
1.1. Contact classwork, including:								
– lectures (L)								
– laboratory work (LW)								
– practice, seminars and/or other seminar-type work (PW)	316	34	70	34	70	54	54	
– control of self-work (CSW)	12	2	2	2	2	2	2	
– test								
1.2. Students' self-work (SSW)								
2. Intermediate attestation								
Exam								
Grading test								
Test (Credit)	54	9	9	9	9	9	9	
Course Project (CP)								
Course Work (CW)								
Workload in hours	328	36	72	36	72	56	56	

4. COURSE OUTLINE

Name of the units with the course outline	Full time of classroom activity in hours according to the forms			Full time of extracurricular work in hours according to the forms
	L	LW	PW	SSW
1	2	3	4	5
1st semester				
Topic 1. General physical training	0	0	16	0
Methods for assessing and developing general endurance. Methods for assessing and developing high-speed abilities. Methods for assessing and developing power abilities. Methods for assessing and developing flexibility				
Topic 2. Classes by sports	0	0	18	0
Special physical training. Training the technique of the sport. Sports tactics training. Competitive practice. Judicial practice.				
Total with regard to 1 semester	0	0	34	0
2nd semester				
Topic 1. Classes by sports	0	0	70	0
Special physical training. Training the technique of the sport. Sports tactics training. Competitive practice. Judicial practice.				
Total with regard to 2 semester	0	0	70	0
3rd semester				
Topic 1. Classes by sports	0	0	34	0
Special physical training. Training the technique of the sport. Sports tactics training. Competitive practice. Judicial practice.				
Total with regard to 3 semester	0	0	34	0
4th semester				
Topic 1. Classes by sports	0	0	70	0
Special physical training. Training the technique of the sport. Sports tactics training. Competitive practice. Judicial practice.				
Total with regard to 4 semester	0	0	70	0
5th semester				
Topic 1. Classes by sports	0	0	54	0
Special physical training. Training the technique of the sport. Sports tactics training. Competitive practice. Judicial practice.				
Total with regard to 5 semester	0	0	54	0
6th semester				
Topic 1. Classes by sports	0	0	54	0
Special physical training. Training the technique of the sport. Sports tactics training. Competitive practice. Judicial practice.				
Total with regard to 6 semester	0	0	54	0
Total with regard to the course	0	0	316	0

Topics of approximate practical work

Sl.№	Topic of practical (seminar) work
1	Practical training in sports.

Topics of approximate laboratory practice

Sl.№	Topic of laboratory work
	Unstipulated Not provided

5. ORGANIZATIONAL AND PEDAGOGICAL CONDITIONS

5.1. EDUCATIONAL TECHNOLOGIES USED FOR COMPETENCES FORMATION

The content of the program for the discipline "Applied physical culture – elective modules for sports" is developed on the basis of the basic component "Physical culture and sport", focused on the formation of the foundations of physical culture of the individual.

The variation component relies on the basic one, supplements it, taking into account regional conditions and traditions of the development of physical culture, and includes the following modules by type of sports:

- basketball;
- volleyball;
- table tennis;
- football;
- Athletics;
- Weightlifting;
- skiing;
- chess.

Practical lessons provide mastering the methods and ways of physical culture and sports activities to achieve educational, professional and life goals of a person, the acquisition of experience in creative, practical activities, the development of independence in physical culture and sports in order to increase the level of functional and motor abilities, directed formation and development of the most important properties and qualities of the individual.

5.2. STUDENTS' MANUAL FOR THE COURSE STUDY

Learning the course, it is advisable for students to implement the following recommendations:

1. Learning of the discipline should be done systematically.
2. After learning one of the course units with the help of the text-book or lecture notes it is recommended to reproduce the basic terms, definitions, notions of the unit from memory.

3. Special attention should be paid to the reports on practical studies and individual complex tasks for self-work.

4. The topics list for individual study is given by the teacher at the lectures. The teacher also provides students with literary sources (first of all, new ones in the periodical scientific literature) for a more detailed understanding of the issues presented at the lectures.

6. LIST OF TEACHING MATERIALS AND INFORMATION SUPPLY FOR STUDENTS' SELF WORK IN THE DISCIPLINE

6.1. PAPER-BASED COURSEWARE

Sl.No	Bibliographic entry (author, title, mode of publication, place, publishing house, year of publication, number of pages)	Number of copies in the library
1. Basic literature		
1		
2. Additional literature		
2.1. Educational and scientific literature		
1	Paland N., Schwedes R. Occupational Safety and Health in Germany : An Overview. Bonn : Federal Min. of Labour & Social Affairs, 1991. 95 p.	1
2	Cockerham W.C. Medical Sociology. 9 ed Upper Saddle Ri : Pearson Education, 2004. 420 p.	1
2.2. Standardized and Technical literature		
	Not used	
3. Students' manual in mastering discipline		
	Not used	
4. Teaching and learning materials for students' self work		
	Not used	

6.2. ELECTRONIC COURSEWARE

Kind of literature	Name of training tool	Reference to information resource	Accessibility of EBN (Internet/local net; authorized free assess)
Basic literature	Vykhodtsev A. N. Manual to practical sessions on medical supervision in physical exercise, sports and clinical practice / Grebenkina N. V., Pashkov V. K., Pashkova E. N., Shpilevaya L. I. Tomsk, SibSMU, 2019.	URL: https://elib.pstu.ru/Record/lanRU-LAN-BOOK-138710	authorized free assess

6.3. LICENSE AND FREE DISTRIBUTED SOFTWARE USED IN THE COURSE EDUCATIONAL PROCESS

Type of Software	Software branding
OS	Windows 10 (подп. Azure Dev Tools for Teaching)
Office applications	Adobe Acrobat Reader DC. Free PDF viewer
Office applications	Microsoft Office Professional 2007. persons. 42661567

6.4. MODERN PROFESSIONAL DATABASES AND INQUIRY SYSTEMS USED IN THE COURSE EDUCATIONAL PROCESS

Branding	Reference to information resource
Scientific Library of the Perm National Research Polytechnic University	http://lib.pstu.ru/
Lan electronic library system	https://e.lanbook.com/
Electronic library system IPRbooks	http://www.iprbookshop.ru/
Information resources of the Network Consultant Plus	http://www.consultant.ru/

7. LOGISTICS OF THE COURSE EDUCATIONAL PROCESS

Type of classes	Name of the necessary basic equipment	Number of units
Practical lesson	Volleyball hall (volleyball net, sports equipment)	1
Practical lesson	Wrestling hall (wrestling mats, climbing rope, crossbar, special sports equipment)	1
Practical lesson	Kettlebell lifting hall (kettlebells, special sports equipment)	1
Practical lesson	Table tennis hall (tennis tables, sports equipment)	1
Practical lesson	General physical training room (wall bars, mats, hanging bars, inclined boards, fitballs, jump ropes, parallel bars)	1
Practical lesson	Mirror room for aerobics (mirrors)	1
Practical lesson	Ski lodge (150 sets of ski equipment, ski track equipment, snowmobile)	1
Practical lesson	An open-air sports arena with 2 mini-football pitches, a long jump pit and a universal sports ground (mini-football gates, basketball backboards, volleyball stands, wall bars, hanging bars, parallel bars, inclined boards, sports equipment)	1
Practical lesson	Gym (simulators, dumbbells, barbells, pancakes, arm wrestling tables, mirrors)	1

8. FUND OF THE COURSE EVALUATING TOOLS

Described in a separate document

Ministry of Science and Higher Education of the Russian Federation
Federal State Budgetary Educational Institution of Higher Education
Perm National Research Polytechnic University

FUND OF ESTIMATING TOOLS

For students' intermediate control in the discipline
"Applied physical training – elective courses (module) by sports type"
Supplement to the Academic Course Working Program

Form of study

Full-time studies

Year(-s): 1, 2,

Semester(-s): 1, 2, 3, 4, 5, 6

Workload:

in credits: 0 CU

in hours: 328 h

The form of intermediate control:

Test 1, 2, 3, 4, 5, 6 semesters

The fund of assessment tools for intermediate certification of students in the discipline "*Applied physical training – elective courses (module) by sports type*" is an application to the work program of the discipline. The fund of evaluation means for the intermediate certification of students in the discipline is developed in accordance with the general part of the fund of evaluation tools for the intermediate certification of the main educational program, which establishes a system for evaluating the results of intermediate certification and the criteria for giving marks. Fund of assessment tools for intermediate certification of students in the discipline establishes the forms and procedures for monitoring progress and intermediate certification of students in the discipline.

1. LIST OF CONTROLLED RESULTS OF STUDYING DISCIPLINE, OBJECTS OF ASSESSMENT AND FORMS OF CONTROL

According to the WPD, the mastering of the educational material of the discipline is planned for six semesters. The discipline provides for practical lessons. Within the framework of mastering the educational material of the discipline, the components of the competences "to know", "be able to", "own", specified in the WPD, are formed, which act as the controlled results of learning the discipline (Table 1.1).

Control of the level of acquired knowledge, mastered skills and acquired possessions is carried out within the framework of the current, midterm and intermediate control in the study of practical material, interviews and tests. Kinds of control are summarized in Table 1.1

Table 1.1 – List of controlled results of learning the discipline

Controlled results of learning the discipline (KAS)	Type of control					
	Current assessment		Midterm		Intermediate	
	D	AC	LWR/ PWR	T/CW		Test
1	2	3	4	5	6	7
Acquired knowledge						
K.1 Knows scientific and practical foundations of physical culture and a healthy lifestyle						PT
K.2 Knows the influence of physical culture and health systems on health promotion, disease and bad habits prevention						PT
K.3. Knows methods of control, assessment and correction of physical development and physical fitness						PT
K.4. Knows rules and methods of planning individual classes of various target orientations						PT
Acquired abilities						
A.1 Is able to apply methods and means of physical culture and sports activities						PT

1	2	3	4	5	6	7
A.2 Is able to perform individually selected complexes of health-improving and adaptive (therapeutic) physical culture, exercise complexes						PT
A.3 Is able to perform the simplest relaxation techniques						PT
Mastered skills						
S.1 Masters the skills of directed formation and development of the most important properties and qualities of a personality, preservation and strengthening of health, physical development and preparedness						PT

D – topic discussion; AC – colloquium (discussion of theoretical material, academic conference); CT – case-task (individual task); LWR – report on laboratory work; PWR – report on practical work; T/CW – control work; TQ – theoretical question; PT – practical task; CT – complex task of grading test.

The final assessment of the achievement of learning results in the discipline is intermediate certification in the form of a test.

2. TYPES OF CONTROL, STANDARD CONTROL TASKS AND SCALES OF LEARNING RESULTS ASSESSMENT

The current control of progress is aimed at ensuring the maximum efficiency of the educational process, at managing the process of forming the given competencies of students, at increasing motivation to study and it provides for assessing the course of mastering the discipline. In accordance with the Regulations of the current monitoring of progress and intermediate attestation of students in educational programs of higher education – bachelor's, specialist's and master's programs in PNRPU, the following types and frequency of current control are provided:

- entrance control, checking the initial level of the student's readiness and its compliance with the requirements for studying this discipline;
- current control of the assimilation of the material (the level of mastering the component "know" of the given competencies) at each group lesson and control of the attendance of lectures;
- intermediate and midterm control of the learners' mastering of individual components "know", "be able" of the given competences by means of computer or blank testing, quizzes, control works (individual homework assignments), abstracts, essays, etc.

Midterm control in the discipline is held the next week after passing the discipline module, and intermediate control – during each control event within the discipline modules;

- intersessional certification, a one-time summing up of the results of current progress at least once a semester in all disciplines for each direction of training (specialty), course, group;
- control of residual knowledge.

2.1. CURRENT CONTROL OF EDUCATION

The current control of the assimilation of the material on the topics is not provided.

2.2. MIDTERM CONTROL

Midterm control for a comprehensive assessment of acquired knowledge, mastered skills and acquired possessions is not provided.

2.2.1. Midterm control for invalid students and people with disabilities

Sample topics of abstracts:

1. Diagnosis and brief description of the type of student's disease. The effect of the disease on personal performance and well-being.
2. Medical contraindications for physical exercise and the use of other means of physical culture in this type of disease.
3. Kinesiotherapy and recommended means of physical culture for this type of disease.
4. Compilation and substantiation of an individual set of physical exercises and available means of physical culture (indicating the approximate dosage).
5. The state of physical culture and sports in modern society.
6. Comparative analysis of physical culture systems in developed countries.
7. The active essence of physical culture in everyday life and professional activity of specialists in this area of training.
8. Comparative analysis of physical educational systems in different countries (Russia and two countries with the longest life expectancy of the population).
9. Value orientations and attitudes towards physical culture of university students (on the example of their course).
10. Means of physical culture and sports in the management of improving the functional capabilities of the body in order to ensure mental and physical activity (in relation to the chosen profession).
11. Physiological mechanisms and patterns of improvement of individual systems of the body under the influence of directed physical training (in relation to the chosen profession).
12. Motor function and increasing the resistance of the human body to various environmental conditions (in relation to the chosen profession).
13. A healthy lifestyle and its components. The structure of life of students of the chosen specialty and its reflection in the way of life. Personal attitude to health as a condition for the formation of a healthy lifestyle.
14. Healthy lifestyle and its components. Human health as a value and factors that determine it. Personal attitude to health as a condition for the formation of a healthy lifestyle.

15. Basic requirements for the organization of a healthy lifestyle. Physical self-education and self-improvement in a healthy lifestyle.

16. Motivation and purposefulness of self-study. Forms and content of self-study (in relation to the chosen profession).

17. Organization of independent physical exercises of various orientations. The nature of the content of classes, depending on age. Features of self-study for women (men).

18. Planning and managing self-study. The limits of the intensity of loads in the conditions of independent studies with persons of different age. The relationship between the intensity of loads and the level of physical fitness.

19. Self-study hygiene. Self-control over the effectiveness of self-study. Participation in sports competitions.

20. Self-control, its main methods, indicators and self-control diary.

21. Correction of the content and methods of physical exercises and sports according to the results of control indicators.

22. Self-control, its main methods, indicators and self-control diary.

23. The use of methods exercise – tests to assess physical development, physique, functional state of the body, physical fitness.

24. The place of PAPC in the system of physical education of students – the future specialist of this direction of training. Factors that determine the specific content of PAPC in the chosen profession. Methodology for the selection of PAPC funds.

25. Organization, forms and means of PAPC of students – future specialists of this direction of training. Control over the effectiveness of professionally applied physical training of students.

26. Industrial physical education. Industrial gymnastics.

27. Features of the choice of forms, methods and means of physical culture and sports during working and free time for specialists in this area of training.

28. Prevention of occupational diseases and injuries by means of physical culture. Additional means of increasing the general and professional performance of specialists in this area of training.

29. The influence of individual characteristics, geographic and climatic conditions and other factors on the content of physical culture of specialists in this area of training. The role of future specialists in the implementation of physical culture in the working collective.

30. Revealing (definition) of professionally important qualities of specialists in this area of training. The use of modern health systems to maintain the level of professionally important qualities (for example, one quality).

31. Revealing (definition) of professionally important qualities of specialists in this direction of training. Selection of means of professionally – applied physical training for their improvement.

2.3. CONTROL STANDARDS FOR TECHNICAL READINESS

Control standards for general physical training and other sports are stored at the Department of Physical Culture and are communicated to students at the first practical lesson.

2.4. INTERMEDIATE CONTROL (FINAL CONTROL)

The conditions for admission to intermediate control are the passage of all practical classes in general physical training and sports.

2.4.1. Approximate control exercises for assessing physical preparedness of students of a special medical group

1. Flexion and straightening of the arms in a lying position (for women, arms on a support with a height up to 50 cm).
2. Pulling up on the bar (men).
3. Raising the body (sitting) from a supine position, hands behind the head, legs fixed (women).
4. Long jump from the spot.
5. Running 100 meters.
6. Running: men – 3 km, women – 2 km (excluding time).
7. Cooper's test (12-minute movement).
8. Swimming for 10 minutes.
9. Cross-country skiing: men – 3 km, women – 2 km (excluding time).
10. Exercises with the ball.
11. Exercises for flexibility.
12. Exercises with a skipping rope.

2.4.2. Control tasks for invalid students and people with disabilities

1. Make up a complex of physical culture micropause for eye fatigue.
2. Make up a set of physical culture pause exercises for labor workers mainly in a sitting position.
3. Make up a set of physical culture pause exercises for labor workers mainly in a standing position.
4. Make up a set of physical exercises for morning hygienic gymnastics.
5. Make up a set of physical exercises to strengthen the abdominal muscles.
6. Make up a set of physical exercises to strengthen the back muscles.
7. Make up a set of physical exercises to develop the flexibility of the spine.
8. Make up a set of physical exercises that contribute to the formation of correct posture.
9. Make up a set of physical exercises with fitball for pregnant women.
10. Make up a set of physical exercises with fitball for weight loss.
11. Make up a set of physical exercises PILATES for the back

12. Make up a set of physical exercises PILATES for pregnant women
13. Make up a set of physical exercises PILATES for recovery from injuries.
14. Make up a complex of breathing exercises for respiratory diseases.
15. Make up a complex of breathing exercises for scoliosis.
16. Make up a complex of breathing exercises during pregnancy.
17. Make up a complex of breathing exercises for diseases of internal organs.
18. Make up a complex of breathing exercises for weight loss.
19. Make up a water hardening program (for a month).
20. Make up a program of air hardening (for a month)
21. Make up a hardening program for a bath, sauna (for a month)
22. Make up a program of "bath procedures". Broom massage. Indications and contraindications.
23. Make up a development program (training schedule) of physical quality "general endurance".
24. Make up a development program (training schedule) of physical quality "strength". Using bodyweight exercises.
25. Make up a development program (training schedule) of physical quality "agility".
26. Make up a development program (training schedule) of physical quality "flexibility". Using active outdoor games.
27. Make up a program (training schedule) to reduce body weight using physical exercises of strength orientation.
28. Make up a program (training schedule) to reduce body weight using aerobic exercise.
29. Make up a program (training schedule) of health-improving training using static-dynamic exercises.

3. CRITERIA FOR ASSESSING THE LEVEL OF FORMATION OF COMPONENTS AND COMPETENCIES

3.1. ASSESSMENT OF THE LEVEL OF FORMATION OF COMPETENCY COMPONENTS

When assessing the level of competence formation within the framework of sampling control, it is considered that the score obtained for the competence component checked in the ticket is generalized to the corresponding component of the entire competence formed within the framework of this academic discipline. When forming the final mark of the interim certification in the form of test, the standard criteria are used, given in the general part of the *FET* of the educational program.