

PHYSICAL EDUCATION

Syllabus

Code and name of the specialty	121 – Software Engineering	Institute / faculty	Faculty of Computer Science and Software Engineering
Name of the program	“Software Engineering”	Department	Software Engineering and Management Information Technologies
Program type	Educational and professional	Language of education	Ukrainian / English

Teachers

Natalia Boreiko, natalia.boreiko@khpi.edu.ua



Assistant professor, PhD (pedagogical sciences), Professor of NTU "KhPI", master of sport, honored coach of Ukraine.
Experience is 27 years. Authored and co-authored over 70 scientific and methodological publications.
Senior lecturer of courses: «Physical Education», «Pedagogy», «Fundamentals of Scientific Researches in Physical Education and Sports» «Coaching Pedagogical Skills» «Introduction to Speciality (017) »

Olesia Bilous, olesia.bilous@khpi.edu.ua



Assistant professor, Ph.D. (technical science), master of sport, teaching in English.
Experience is 6 years. Authored and co-authored 47 scientific and methodological publications.
Senior lecturer of courses: «Physical Education (in English)», «Biochemistry of physical culture and sports», «Fundamentals of the theory of health and healthy lifestyle», «Methods of recovery in sports», «Current problems of physical culture and sports».

General information about the discipline

Summary	The subject of study is the process of improving the forms and functions of the body, the formation of motor skills, skills, knowledge and development of basic physical qualities of students, the formation of understanding of the role of physical culture in personality development and preparation for professional activity. health and sports activities to achieve personal and professional goals.		
Course objectives	The purpose of teaching is to educate students, the need to acquire knowledge, skills and abilities in specializations in sports, physical activity, the application of acquired values in the lives of future professionals, maintaining and promoting health. Consistent formation of physical culture of the specialist's personality, which corresponds to the First (bachelor's) level.		
Format	Practical training. Final control - differentiated test.		
Semester	1, 2, 3, 4, 5, 6.		

Volume (credits) / Type of course (obligationer / selective)	12 / Obligationer	Lectures (hours)	-	Practical classes (hours)	360	Independent work (years)	-
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Competence	GC 02. Ability to apply knowledge in practical situations. GC 05. Ability to learn and master modern knowledge. GC 06. Ability to search, process and analyze information from various sources. GC12. Ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of
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society, techniques and technologies. active recreation and leading a healthy lifestyle.

Learning outcomes	Teaching and learning methods	Forms of assessment (continuous assessment CAS, Final assessment FAS)
<p>PO25. Apply the principles of moral, cultural, scientific values and increase the achievements of society, use different types and forms of physical activity to lead a healthy lifestyle and professional activities in the field of information technology.</p>	<p>1. By the nature of teaching material: - verbal: conversation, story, description, instruction, accompanying explanation, instructions, instructions and commands, verbal assessments, verbal reports, analysis and discussion, mutual explanation. - visual methods: direct visibility; the method of indirect clarity; methods of directed sensation of motor action; methods of urgent information. - practical methods: methods of strictly regulated exercise; game method; method of competition.</p> <p>2. By the organizational nature of training: - methods of organization and implementation of educational and cognitive activities; - methods of stimulating and motivating educational and cognitive activities; - methods of control and self-control in learning; - double teaching methods.</p> <p>3. By the logic of perception and assimilation of educational material: inductive - deductive, reproductive, pragmatic, research, problematic.</p>	<p>continuous assessment (CAS): - active participation of students in practical classes; - methodological and practical standards; - results of physical fitness testing; - results of testing of special readiness; - performance of individual tasks.</p> <p>Final assessment (FAS): - results of accumulation of estimates of current control from separate modules</p>

EVALUATION SYSTEM

Distribution of points for assessing the success of students	The sum of points for all types of educational activities	Grade ECTS	Score on a national scale	Scoring	Basic medical group														
	90-100	A	excellently		<table border="1"> <tr> <th>Types of educational activities</th> <th>Number of events</th> <th>Grade</th> </tr> <tr> <td>Attending training sessions</td> <td>1 - 32</td> <td>1 - 80</td> </tr> <tr> <td>Control tests (on physical fitness; on special training)</td> <td>3 - 5</td> <td>0 - 25</td> </tr> <tr> <td>Participation in sports competitions</td> <td rowspan="2">1 - 5</td> <td rowspan="2">0 - 10</td> </tr> <tr> <td>Encouraging points</td> </tr> </table>	Types of educational activities	Number of events	Grade	Attending training sessions	1 - 32	1 - 80	Control tests (on physical fitness; on special training)	3 - 5	0 - 25	Participation in sports competitions	1 - 5	0 - 10	Encouraging points	
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	82-89	B	fine																
74-81	C																		
64-73	D																		
60-63	E	satisfactorily																	
35-59	FX																		
0-34	F	unsatisfactory with mandatory re-study of the discipline	<table border="1"> <thead> <tr> <th colspan="3">Special medical group</th> </tr> <tr> <th>Types of educational activities</th> <th>Number of events</th> <th>Grade</th> </tr> </thead> <tbody> <tr> <td>Attending training sessions</td> <td>1 - 32</td> <td>1 - 80</td> </tr> <tr> <td>Methodical and practical standards, preparation of the abstract, activity at seminars</td> <td>1 - 5</td> <td>0 - 15</td> </tr> <tr> <td>Participation in the organization of sports events</td> <td rowspan="2">1 - 5</td> <td rowspan="2">0 - 10</td> </tr> <tr> <td>Encouraging points</td> </tr> </tbody> </table>	Special medical group			Types of educational activities	Number of events	Grade	Attending training sessions	1 - 32	1 - 80	Methodical and practical standards, preparation of the abstract, activity at seminars	1 - 5	0 - 15	Participation in the organization of sports events	1 - 5	0 - 10	Encouraging points
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Course policy

The student is obliged to attend practical classes on schedule, not to be late. To pass a medical examination, to have a doctor's permission to study. In classes to be in a sports form that does not compress movements and in sports shoes. It is forbidden to leave the venue without permission. Perform only those exercises that the teacher gives. Missed training without a good reason is subject to rework.

The structure and content of the course

BASIC MEDICAL GROUP

Content module 1

Physical education as a discipline. Specializations in sports, in types of motor activity. Occupational safety during physical education classes

Theoretical preparation	Methodical preparation	Physical training	Control
<p>1. Physical education and sports in the formation of universal values, the development of important motor skills, health and work.</p> <p>2. The system of organizational forms and methods of conducting physical education classes in higher education.</p> <p>3. Requirements for conducting physical education classes.</p>	<p>1. Testing and evaluation of physical qualities and skills and abilities.</p> <p>2. Organization and methods of conducting independent physical education classes in a higher education institution.</p> <p>3. Methodical bases of self-control of a physical condition in the course of employment by physical exercises.</p>	<p>Strengthening of health indicators, development of physical condition, strengthening of posture, formation of proportional physique, development of motor qualities, skills and abilities by means of specializations.</p>	<p>Determining the level of mastering the physical culture of students through a comprehensive examination and assessment of the necessary knowledge, methodological and practical skills, general physical and special training.</p>

Content module 2

Mastering the means of specialization, the development of motor skills. Formation of the leading professionally important qualities of experts, development of the basic physical and education of mental qualities by means of specializations.

Theoretical preparation	Methodical preparation	Physical training	Control
<p>1. Typological features of the manifestation of the properties of the nervous system.</p> <p>2. Means and methods of development of basic physical and education of mental qualities.</p> <p>3. Methods of assessing health indicators, level of physical condition for control and self-control of students.</p>	<p>1. Methods of constructing a certain form of training in the selected type of motor activity systems of physical exercises.</p> <p>2. Indicators of physical activity in the classroom.</p> <p>3. General provisions for hardening of the body.</p>	<p>Strengthening health indicators, improving physical condition, strengthening posture, forming a proportionate physique, education of physical qualities, skills and abilities by means of specializations, active hardening.</p>	<p>Determining the level of mastering the physical culture of students through a comprehensive examination and assessment of the necessary knowledge, methodological and practical skills, general physical and sports-technical training in specializations.</p>

Content module 3

Consolidation of leading professionally important qualities of specialists, improvement of basic physical and education of mental qualities, motor skills and abilities by means of specializations. Adjustment of the content and methods of conducting physical education classes on the principle of specializations.

Theoretical preparation	Methodical preparation	Physical training	Control
<p>1. Physical education and sports as a means of active recovery after the initial</p>	<p>1. Methods of forming professionally important motor skills and abilities.</p>	<p>Strengthening health indicators, improving physical condition,</p>	<p>Determining the level of formation of students' physical culture</p>

<p>load, strengthening the body's resistance to harmful environmental factors and improving efficiency.</p> <p>2. Health and applied value of physical education and sports.</p> <p>3. Fundamentals of professional and applied physical training.</p>	<p>2. Improving efficiency and accelerating its recovery in various types of work. Methods of selection and performance of physical exercises to prevent fatigue.</p> <p>3. Methods of selection and performance of physical exercises to prevent fatigue.</p>	<p>strengthening posture, forming a proportionate physique, education of physical and mental qualities, moral and volitional qualities, motor skills, mastering the means of gymnastics, athletics, sports, active hardening of the body.</p>	<p>through a comprehensive examination and assessment of the necessary knowledge, methodological and practical skills, general physical and special training.</p>
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Content module 4

Improving the technique of performing movements and physical exercises in specializations. Improving health indicators, the level of functional readiness of students by means of specializations. Control tests of students' physical fitness.

Theoretical preparation	Methodical preparation	Physical training	Control
<p>1. The impact of physical education classes on specializations to accelerate vocational training and retraining.</p> <p>2. Fundamentals of the system of ensuring the ability to work and its recovery by means of physical education.</p> <p>3. General idea of the organism and its self-regulation.</p>	<p>1. Methodical bases of sports training.</p> <p>2. Methods of building independent physical exercises.</p> <p>3. Basics of athletic gymnastics.</p>	<p>Strengthening health indicators, improving physical development, strengthening posture, forming a proportionate physique, education of physical and mental qualities, motor skills, willpower, possession of aerobics, sports games, athletics, swimming, active general hardening of the body.</p>	<p>Determining the level of formation of physical culture of students through a comprehensive examination and assessment of the necessary knowledge, methodological and practical skills, general and sports and technical training in specializations.</p>

Content module 5

Mastering advanced techniques to increase the training effect in practical classes on specializations. Characteristics of functional systems of the body and their development under the influence of purposeful training and exercise.

Theoretical preparation	Methodical preparation	Physical training	Control
<p>1. Positive changes in the body's systems during exercise, dosed loads and under the influence of long-term training.</p> <p>2. Hygienic bases of the chosen systems of physical exercises.</p> <p>3. Non-traditional systems for strengthening and improving health and physical improvement.</p>	<p>1. Fundamentals of methods of organizing physical exercises to prevent fatigue, increase efficiency and accelerate its recovery in various types of physical activity and forms of work.</p> <p>2. Basics of planning methods, construction of independent classes on selected systems of physical exercises.</p> <p>3. Methods of using temperature stimuli as a means of increasing and restoring efficiency.</p>	<p>Strengthening health indicators, improving physical development, strengthening posture, forming a proportionate physique, education of physical and mental qualities, motor skills and abilities, volitional abilities, means of gymnastics, athletics, sports games, applied physical training, tempering and other systems of physical exercises.</p>	<p>Determining the level of formation of students' physical culture through a comprehensive examination and assessment of the necessary knowledge, methodological and practical skills, general physical and sports-technical training in specializations.</p>

Content module 6

Formation of an individual system of using convenient means and methods of improving physical condition and rapid recovery in various types of motor activity. Fundamentals of individual assessment of the level of physical fitness of students.

Theoretical preparation	Methodical preparation	Physical training	Control
<p>1. Basics of rational nutrition according to the assessment of necessary knowledge, methodical and practical skills, general physical, sports and technical training with specialization and psychophysical readiness for professional activity. Determining the level of formation of physical culture of students through a comprehensive examination and various types of physical activity and working conditions, features of life and physical education classes.</p> <p>2. Personal treatment and its diagnosis. Classification of types of diagnostics.</p>	<p>1. Basics of methods of balanced nutrition.</p> <p>2. Self-control in the process of physical education and sports.</p> <p>3. Requirements for the means of restoring sports performance.</p>	<p>Strengthening health indicators, improving physical development, strengthening states, forming a proportionate physique, education of physical and mental qualities, motor navigators and skills, volitional abilities, selected by means of gymnastics, athletics, sports games, special technical training, tempering and other systems of physical exercises.</p>	<p>Determining the level of formation of physical culture of students through a comprehensive examination and assessment of the necessary knowledge, methodological and practical problems, general physical, sports and technical training with specialized and psychophysical abilities for professional activity.</p>

SPECIAL MEDICAL GROUP

Theoretical preparation	Methodical preparation	Physical training	Control
<p>1. General principles of physical rehabilitation.</p> <p>2. Basics of general health classes.</p> <p>3. Features of health-improving training at various deviations in a state of health. Non-traditional remedies for health disorders.</p> <p>4. Basics of medical nutrition.</p>	<p>1. Methods of conducting general health classes.</p> <p>2. Methods of eliminating certain deviations in the state of health in the process of physical education.</p> <p>3. Features of the method of general and professional-applied physical training for health disorders.</p> <p>4. Features of the method of using physical education to optimize performance, prevent fatigue, increase efficiency in health disorders.</p>	<p>Individualization of practical physical education classes for students depending on the level of functional and physical training, the nature and severity of deviations in health.</p>	<p>Identify the level of knowledge and skills of using physical culture to restore and improve health.</p>

Literature

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Norms of academic ethics

The student must adhere to the Code of Ethics of Academic Relations and Integrity of NTU "KhPI": to show discipline, politeness, friendliness, honesty, responsibility

The content of the Syllabus is fully consistent with the work program of the discipline "Physical Education".