



Fundamentals of a healthy lifestyle

Work program of the discipline (Syllabus)

Details of the discipline

Level of higher education	<i>First (bachelor)</i>
Field of knowledge	<i>All</i>
Specialty	<i>All</i>
Educational program	<i>All</i>
Course status	<i>Normative</i>
Form of study	<i>Full-time (daily)</i>
Year of study, semester	<i>1st year (first and second semesters)</i>
Discipline	<i>3 ECTS credits classroom 72 hours: lectures - 18 hours, practical - 54 hours, independent work - 18 hours</i>
Semester control / control measures	<i>Credit, modular control works (Part 1, Part 2), calendar control</i>
Class schedule	<i>According to schedules of faculties</i>
Language of instruction	<i>English</i>
Information about the course leader/teachers	http://ktos-fbmi.kpi.ua/article/spivrobotnyky

The curriculum of the discipline

1. Description of the discipline, its purpose, subject of study, and learning outcomes

The main purpose of the discipline "Fundamentals of a healthy lifestyle" is to form students' motivation to lead a healthy lifestyle and the ability to use different types and forms of physical activity for active recreation and healthy living (**LC12**)

After mastering the discipline, students must demonstrate the following learning outcomes:

Knowledge:

- on the basics of human health and methods of its assessment;
- on the impact of health-improving behavior on the quality of human life;
- on the principles of rational nutrition;
- on the impact of physical activity on the human body;
- on the basics of applying motor activity programs of various directions;
- on the peculiarities of physical activity of people of different ages and health status.

Skills:

- apply the components of a healthy lifestyle in order to achieve personal and professional goals;
- use means of physical activity in order to form personal health;
- exercise control and self-control over the state of the body;
- analyze and plan means of physical activity in order to improve physical and mental performance, development of physical skills.

2. Prerequisites and post-requisites of the discipline (place in the structural and logical scheme of study in the relevant educational program)

The discipline "Fundamentals of a healthy lifestyle" belongs to the cycle of general training disciplines, it is a mandatory component of the Educational Program.

3. Content of the discipline

The course material consists of two sections:

Section 1. Formation of motivation for a healthy lifestyle

Topic 1.1. General principles of health

Topic 1.2. Health effects of behavior

Topic 1.3. Health and age periods of human life

Topic 1.4. Nutrition and health

Section 2. Formation of skills and abilities of a healthy lifestyle by means and methods of physical activity

Topic 2.1. Motor activity of persons of different age, gender

Topic 2.2 Individual programs of physical activity

4. Training materials and resources

Basic training literature:

Training manuals

Basic educational literature:

1. Alan L Buchman Nutritional Care of the Patient with Gastrointestinal Disease. CRC Press, 2016.- 180p.

2. Dr. Mahesh Singh Dhapola, Mr. Debabrata Sarkar, Prof. Vishan Singh Rathore A Critical Analysis of the Side Effects of Over Stretching. International Journal of Physical Education and Sports www.phyedusports.in Volume: 6, Issue: 04, Pages: 01-03, Year: 2021.

3. HOPPER. Overcoming trauma through yoga: Reclaiming your body. Berkeley, CA: North Atlantic Books, 2011.

4. F.P. Brennan, B.W. Alsanius, A. Allende, C.M. Burgess, H. Moreira, G. S. Johannessen, P.M.L. Castro, M. Uyttendaele, P. Truchado, N.J. Holden, Harnessing agricultural microbiomes for human pathogen control, ISME Commun. 2 (2022) 44, <https://doi.org/10.1038/s43705-022-00127-2>.

5. Lim EJ, Hyun EJ. The Impacts of Pilates and Yoga on Health-Promoting Behaviors and Subjective Health Status. Int J Environ Res Public Health. 2021 Apr 6;18(7):3802. doi: 10.3390/ijerph18073802. PMID: 33917304; PMCID: PMC8038747.

Additional literature:

1. Khan, Md Fokrul Islam, Fariha Anjum, Sadia Alam, and Erfanul Hoque Bahadur. "DEPRESSION DETECTION THROUGH ACTIVITY RECOGNITION: DEEP LEARNING MODELS USING SYNTHESIZED SENSOR DATA." JOURNAL OF BASIC SCIENCE AND ENGINEERING 21, no. 1 (2024): 571-590.

2. Zalewska M, Maciorkowska E. Selected nutritional habits of teenagers associated with overweight and obesity. Peer J. 2017;5:e368

3. Phrompaet S, Paungmali A, Pirunsan U, Silitertpisan P. Effects of pilates training on lumbo-pelvic stability and flexibility. Asian J Sports Med. 2011 Mar;2(1):16-22. doi: 10.5812/asjms.34822. PMID: 22375213; PMCID: PMC3289190.

4. Simioni, C.; Zauli, G.; Martelli, A.M.; Vitale, M.; Sacchetti, G.; Gonelli, A.; Neri, L.M. Oxidative Stress: Role of Physical Exercise and Antioxidant Nutraceuticals in Adulthood and Aging. Oncotarget 2018, 9, 17181–17198

5. MICHAEL I. POSNER AND MARY K. ROTHBART Developing mechanisms of self-regulation. Development and Psychopathology, 12 (2000), 427–441

6. Papassotiriou, I.; Taxildaris, K.; et al. Oxidative Stress Biomarkers Responses to Physical Overtraining: Implications for Diagnosis. Free Radic. Biol. Med. 2007, 43, 901–910.

7. Gittelsohn J, Vastine AE. Sociocultural and household factors impacting on the selection, allocation and consumption of animal source foods: current knowledge and application. *J Nutr.* 2003; 133(11 Suppl 2): S4036–41.

8. Raizada RDS, Tsao FM, Lui HM, Holloway ID, Ansari D, Kuhl P: Linking brain-wide multivoxel activation patterns to behavior: Examples from language and math. *NeuroImage* 51:462–471.

9. https://www.researchgate.net/publication/381339383_Social_determinants_of_health_a_positive_manifesto_for_public_health

10. Nairana Cristina Santos Freitas, Alinne Figueiredo Rocha, Marcelle Karyelle Montalvão Gomes, Luis Carlos de Oliveira Goncalves, Aníbal Monteiro de Magalhães Neto, Patrícia do Socorro Chaves de Araújo Yoga: interface entre a prática corporal integrativa, qualidade de vida e educação física. *Conjecturas*, ISSN: 1657-5830 – eISSN: 2764-2984, Vol. 22, Nº 5

Educational content

5. Methods of mastering the discipline (educational component)

Chapter 1. Theoretical and methodological foundations of motivation for a healthy lifestyle.

Topic 1.1. General principles of health

Lecture 1: Health as a state task and personal need of a person.

History of human cognition of the essence of health from ancient times to the present. Concepts of health and healthy lifestyle. State approaches to the formation, strengthening and preservation of human health in the world. Human health - global problems of our time.

Practical lesson № 1. The main components of health. Essential elements of human health, its spiritual well-being and harmonious development: mental, physical, social. Natural factors of health The relationship between pathology and health, normology. Mechanisms of health research.

Conducting an express survey.

Practical lesson № 2. The essence of a healthy lifestyle and the conditions for its maintenance. The role of motivations and attitudes in shaping the foundations of a healthy life of a modern person. Components of a healthy lifestyle of a modern person: way, level, quality, lifestyle, etc.

Conducting an express survey

Practical lesson №3. Genetic aspects of health. Biorhythms and health. Mental and physical performance of a person. Fatigue, its essence and diagnosis. Overwork, measures to prevent it. The daily routine.

Conducting an express survey

Topic 1.2. Health effects of behavior.

Lecture 2. Hierarchy of needs and values in human existence. Heredity, habits, preferences.

Social determination of human health: hierarchy of needs and values in human existence. Heredity, habits, preferences. Formation of behavioral safety skills. Moral principles and principles of life harmonization. Self-discipline, respect, moderation, spirituality, control of desires and emotions.

Practical lesson № 4. Human health and behavioral features that contribute to its preservation and strengthening. The impact of behavior on human reserves and resources. Deviant behavior (alcohol, drug use, tobacco smoking, substance abuse, etc.) and its prevention. Social conditions of health.

Conducting a quick survey.

Practical lesson № 5. Physical health, its essence. Adaptive potential. Modern approaches to determining the quantitative characteristics of physical health. Comprehensive assessment of physical performance: testing of physical qualities, functional diagnostics of body systems, anthropometry, assessment of the musculoskeletal system. Methods of self-assessment of physical conditions.

Conducting an express survey

Topic 1.3. Health and age periods of human life

Lecture 3: Age-related changes in personal potential.

Determining the biological age of a person. Theories of human ageing. The concept of "psychosomatic state of a person". Psychosomatic disorders, their characteristics. Means of regulating the psychosomatic state. Mental health. Psychosomatic overload and factors of its occurrence.

Practical lesson 6. Biomarkers of ageing and means of influencing them. Theories of ageing.

Conducting an express survey

Practical lesson 7. Health and environmental factors. Healing properties of colour, sound, smell, etc. Fundamentals of herbal medicine. Psycho-emotional and mental means of regulation and self-regulation of the psychosomatic state of a person. Theory of colour perception by M. Luscher. Types of temperament.

Conducting an express survey

Practical lesson № 8. Stress, its concept. Stress factors. Stress resistance in different periods of life, prevention of disorders. Emotional discomfort as a factor in psychosomatic disorders. Prevention of psychosomatic disorders. Persons from risk groups.

Conducting an express survey

Topic 1.4: Nutrition and health

Lecture 4. Influence of qualitative and quantitative parameters of nutrition on human health.

Regulation and self-regulation of the psychosomatic state of a person by means of nutrition. Nutrition and health. Modern theories of nutrition. Characteristics of the main food groups. Balanced rational nutrition regimen: norm, frequency, daily distribution of nutrient intake, caloric content.

Practical lesson №9. Modern problems of nutrition. Harmful effects of modern nutrition. The impact of food additives on human health. Formation of human food motivation.

Conducting an express survey.

Practical lesson №10. Modern theories of nutrition. Principles of proper nutrition. Health and medical nutrition. The role of water in the life support of the body.

Conducting an express survey.

Practical lesson № 11. Components of food and their importance for the body. Rules for the use of food products. Food quality and diseases. Food contamination and risk of disease.

Conducting an express survey

Practical lesson №12. Determination of body weight components and methods of its correction. Features of nutrition in representatives of different somatotypes. Features of fitness and sports nutrition.

Conducting an express survey

Lecture 5. Environmental aspects of nutrition

Factors of man-made impact on the environment. Environmental pollution in the context of hostilities and the main methods of environmental protection. Soil and microorganisms. Food purification technologies.

Practical lesson № 13. Problems of hidden starvation: the impact of vitamin and mineral deficiency on health. Effect of nutrition on microbiota. Influence of diet on metabolic processes in the body. The pyramid of healthy eating. Features of nutrition in the presence of psychosomatic disorders. Antidepressant products.

Conducting an express survey.

Practical lesson № 14 Performing a module test (Part 1)

Section 2. Formation of skills and abilities of a healthy lifestyle by means and methods of physical activity.

Topic.2.1. Motor activity of persons of different age, sex

Lecture 6. Physical activity as a biological need of the body

The essence of physical activity. The impact of physical activity on the human body. Human musculoskeletal system, features of its formation and importance for human health.

Practical lesson № 15. Physical activity and its impact on the human body. Hypodynamia and hypokinesia and their impact on the human body. Norms of motor activity. Influence of motor activity on the state of the musculoskeletal system.

Conducting an express survey.

Practical lesson № 16. Physical exercises as a means of nonspecific prevention of functional disorders and diseases. Types of physical exercises. Principles of physical activity.

Conducting an express survey

Practical lesson № 17: Age dynamics of human performance decline. Factors of decline in human performance. Manifestation of physical qualities in different age periods.

Conducting an express survey

Lecture 7. Health improvement systems.

Health improvement systems at the present stage of development of physical culture. Health systems and their components. Classification of the main natural health systems. Scientifically grounded, folk and traditional health systems.

Practical lesson № 18. Breathing systems of health improvement: breathing by K. Buteyko; breathing by O. Strelnikova; breathing techniques in yoga and martial arts. Bodyflex system.

Conducting an express survey.

Practical lesson № 19. Health nutrition systems: features of dietary nutrition. M. Montignac's nutrition system. Veganism and vegetarianism. Intermittent fasting system.

Conducting an express survey.

Practical lesson № 20. Systems of balneological influence on the body: O. Zalmanov's system; S. Kneipp's system; Wimm Hof's system, types of hardening.

Conducting an express survey.

Practical lesson № 21. Systems of physical development: Katsuzo Nishi's health system. Systems of recreational walking and running. The system of J. Pilates. The system of Moshe Feldenkrais. T. Hanna's somatics. Water aerobics.

Conducting an express survey

Topic 2.2 Individual programmes of physical activity.

Lecture 8. Rationale and application of motor activity programmes of different directions.

Purpose and tasks of training programmes of health and sports orientation. Principles of health improvement training. Taking into account individual characteristics of a person during the preparation of training programmes of health-improving orientation. Orientation of training programmes.

Practical lesson № 22. Characteristics of loads used in training programmes. Structure of a training session. Features of application of physical loads of different orientation. Control and self-control over the state of the body.

Conducting an express survey.

Lecture 9. Methods of mastering programmes on motor activity of different directions. Methods of development of physical qualities of a person. Methods of restoring physical performance.

Practical lesson № 23. Methods of endurance and speed abilities development.

Conducting an express survey

Practical lesson № 24. Methods of strength training.

Conducting an express survey

Practical lesson № 25. Methods of flexibility development. Methods of developing coordination and agility.

Conducting an express survey.

Practical lesson №. 26: Performing a module test (Part 2).

Practical lesson № 27: Conducting a credit

6. Independent work of the student

Preparation for practical classes, completion of module tests.

Independent work of a higher education applicant (18 hours) involves preparation for classroom classes and control activities.

Distribution of SRS hours: preparation for practical classes - 9 hours; preparation for the ICR - 6 hours; preparation for the test - 3 hours.

7. Policy of the discipline (educational component)

System of requirements for students:

Rules of conduct in the classroom: compliance with safety requirements.

Rules for the protection of individual tasks: compliance with the principle

Rules for awarding incentive points: incentive points are awarded for performance of analytical work on topics agreed with the teacher up to 10 points.

- policy of deadlines and rescheduling: classes that are missed without good reason, are completed in the allotted time at the end of the semester. Students have the possibility of two reshuffles in the presence of the commission.

- policy on academic integrity: policy, principles of academic integrity, and norms of ethical behavior of students and employees of the University are defined in the code of honor of KPI named after Igor Sikorsky (see: [https // kpi.ua / code](https://kpi.ua/code)).

8. Types of control and rating system for assessing learning outcomes (RSM)

The first semester

1. Completion of test tasks in practical classes

In practical classes 1-9, the test tasks are worth 2 points.

The maximum number of points for test tasks is 18 points.

The maximum mark is 18 points.

Calendar control is performed during the semester as a monitoring of the current state of compliance with the syllabus requirements. A student receives a positive result from the QC when his/her current rating score is at least 50% of the maximum possible.

Second semester

1. Completion of test tasks in practical classes

1. In practical classes 10-13, 15-25, the test tasks are worth 2 points.

The maximum number of points for test tasks is 30 points.

2. Module control work (1 and 2 Parts)

The MCW (Parts 1, 2) is conducted at the 14th and 26th practical lesson as a test containing 26 test tasks in each of the parts, each correct answer is evaluated in 1 point.

The maximum mark for the MCW is 52 points.

Calendar checks are performed twice a semester to monitor the current status of syllabus requirements. A student receives a positive result from the QC when his current rating score is at least 50% of the maximum possible at the time of the QC.

The final assessment of the student's mastery of the educational component is assessed by the result of his work for the semester with the transfer of his rating points to the university assessment scale (Table 1).

The final student's rating cannot exceed 100 points!

Semester control - credit.

If a student scores less than 60 points in the 1-2 semester or wants to increase his / her rating score, then in the last scheduled session in the 2nd semester (18th week), he/she is given the ability to perform a test, and its previous rating is revoked.

The test is conducted in the form of testing. The student is offered an integrated test containing 50 questions, each correct answer is evaluated in 2 points.

The maximum number of points for the integrated test is 100 points.

The points obtained by the student for the integrated test are translated into a grade on a university scale:

Table 1. Correspondence of rating points to grades on the university scale

Student Score	University Score	Student rating points	University grade
	95 – 100		Excellent
	85 – 94		Very Good
	75 – 84		Good
	65 – 74		Satisfactory
	60 – 64		Sufficient
	< 60		Unsatisfactory

9. Additional information on the discipline (educational component)

The study of the material on the subject provides the use of modern technologies in the educational process.

Work programme of the academic discipline (silabus):

Compiled by:

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Approved by the Department of Health Improvement and Sports Technologies (minutes № 12, from 24.05.2024)

Approved by the Methodological Council of the University (minutes № 8, from 20.06.2024)