Annotation. Consider the ratio of students with disabilities to physical education for learning. Justified starting conceptual tenets of the theory and methodology of physical education students with different nosology. Are proven theoretical knowledge of motor activity with students nosology: vision, hearing, musculoskeletal and cerebral palsy, diabetes mellitus and with somatic diseases. It is noted that in the formation of the modern system of physical education of young people with disabilities to the forefront should be nominated by the humanistic ideas of respect for the individual, taking care of his health and development. Accentuated the need to generate dynamic system of physical education students, which gives a person a deep knowledge of his body, his motor capabilities, effective means of exposure to psychophysical conditions and methods of their use, maintain and improve health.

Keywords: student, nosology, physical education, sports.

Introduction
Standard regulations of equal opportunities for disabled [10] determine principle of equal right of disabled people, which envisages that every individual is equal in participation on life of society. Disabled people should obtain required support with receiving education or job.

At the same time receiving good education, in particular at higher educational establishments, is one conditions of their integrating in society. Researches of modern labor market showed that disabled graduates from higher educational establishments (HEE) have by 80% more chances to find job that disabled people without higher education [2, 9, 11, 13].

It is necessary to note that physical education of youth at higher educational establishments – is an integral part of educational system, a component of humanitarian education, a condition of optimization of physical and mental state, physical development of a personality, preparation for demands of life activity. With it, governmental authorities regard problems of physical education’s development and sports as program ones, as the most economically profitable and effective mean of morbidity’s prophylaxis, strengthening of genetic fund and solution of other social problems. Alongside with it recent years there have been observing negative trends in development of sports for disabled students. It gives grounds to consider our topic an urgent one.

The work has been fulfilled as per plan of scientific-research works of Open international university of development of men “Ukraine”.

Purpose, tasks of the work, material and methods
The purpose of the research is to attract attention of specialists to physical education and sports of disabled students in the period of their study at HEE.

Results of the researches
Recent time there has been happened re-evaluation of personality’s role in development of our society and it is connected with processes of humanization, democratization, liberalization and growing publicity. Just these processes elucidated one of the most important problems of present time – the problem of disabled people; attracted attention of politicians, scientists, public figures, workers of secondary and higher educational establishments to it.

Increasing level of disablement in the world is connected with complication of production, increasing of quantity and intensity of transport means, military conflicts and terrorist acts, worsening of ecology, restricting of motion functioning and increasing of pharmacological means of human health correction and etc.

Restriction concerning entering higher educational establishments by people with health problems, which was valid up to 90-s closed for opportunity for receiving higher education by disabled. And only recent time, owing to new governmental policy in the field of realization of constitutional rights of disabled people, they have been admitted to higher education.

In many countries of the world (Great Britain, Canada, USA, Russia and other) in legal framework and in sphere of social protection term “disabled” is commonly accepted and it bears not only medical sense (not able for labor) but also negative social meaning. Recent time in domestic (Ukraine) legal documents there have been used such terms as: “students-disabled”, “person with different nosologies”, “ person with health problems”, “person with special demands”.

In our research, guiding first of all by student’s mental features and age, we thought it purposeful to use term “student with health problems”.

Student with health problems is a person, who has physical or mental abnormalities, preventing form mastering of academic disciplines without ensuring of special conditions for education. These special conditions are: special academic programs and methods of teaching, individual technical means and aids for studying and ensuring of life functioning conditions pedagogical, medical, social, physical culture – sports and other services, without which education of such students is impossible.
Support of education of students with health problems exists in all developed countries of the world. It started in compliance with World-round program of measures, devoted to disabled people, which was adopted by General Assembly of UN in its Resolution 37/52, dated December 3rd, 1982 and is being fulfilled as per Standard regulations for provisioning of equal opportunities for disabled (Resolution of GA UN 48/96, dated December 20th, 1993) [10].

As per the data of special literature [8, 11], in Russia, class rooms for students with hearing problems are equipped with active electronic blackboards and blackboard with mirrors for watching lecturer’s articulation, if he speaks with his back facing students; FM- equipping of class rooms, inductive loops, gesture translation; there also exists a tutor support, devices for writing summaries; integration of students in educational environment starts at 4th year of study. They also use informational technologies of education, electronic manuals, remote teaching. Also correcting classes, medical-psychological rehabilitation, gesture-diagnostics, professional rehabilitation are conducted. Students with hearing problems are offered hearing aids, audio-class “Sonet”, radio-class “Sonet-R”, hearing-speech stimulator “Solo”.

Students with eyesight defects are provided with programmed apparatus complex “Reading machine INFRA-100 h”, system of audio-recording of “speaking books” with speech interface”, adapted versions of Russian language programmed speech synthesizers.

Students with defects of supporting motor system can use specially equipped for wheelchairs first rows of auditorium, library premises. All students with health problems are provided with psychological support and correction, monitoring of health, physical rehabilitation, applicators, musical puncture, art therapy, ramps and rails along staircase, proper floor covering, sufficient width of corridors, access communications, specialized parking.

Recent years universities in Great Britain still more have been understanding demands of students with health problems, create special conditions for them, hire disabled as experts in questions of such students’ supporting.

In the country there is National board for disabled students – Skill, which provides analytical information about all HEE of the country, consulting services in different aspects of studying, social life, choosing of profession; it carries out scientific research works, propagates achievements of disabled, settle communications between them, lobbies their interests in governmental circles, co-operates with public organizations of disabled.

Cambridge University, which consists of 31 institutes and more than 100 faculties, has sufficient experience of successful education of disabled students and post-graduates. It has operating Center of disabled students’ support. The University provides students with individual curriculums, with adapted for their demands accommodation, is required – hires personal assistant.

In Oxford University there is Service of special demands for disabled students, which supports them in their studying. For students, who require writing or reading assistants there is a special personnel, from which they can choose a tutor.

In Great Britain there is also governmental system of welfare for disabled students (WDS), which is provided by local educational authorities. WDS is provided for HEE students, post-graduate and students of remote form of education.

In Canada, at university Manitoba (Winnipeg) there is Service of disabled students’ support, free services of which are accessible for students of any form of education. Also Center of academic support operates, in which students and post-graduates with health problems can request for additional classes in certain disciplines.

In Germany, one of the largest universities is university in Karlsruhe, in which about 30 thousand of students study and maximally favorable conditions for disabled students were created. As on to day, on tourist map of the city there have been marked all places, equipped for disabled: parking, WC, ramps, etc. Monitoring of accessibility is carried out by students themselves, who give to city administration information about all barriers, requiring elimination.

In universities of USA there operates Service of support for disabled, which renders academic, coordination and consulting assistance to students with health problems. In these universities there are clinic, rehabilitation and recreational centers, workshops for repairing of wheelchairs, centers of informational technologies and computer education, service of transportation of students with eyesight and supporting motor system’s defects, students’ centers of leisure and centers of tourism. Service of employment prepares students for placing in a job.

In Denmark, after adopting of low about special pedagogic, in 2000-2001 they started new system of supporting of disabled students. The purpose of this low is to provide students with physical or mental defects with equal with other students’ opportunities for education under condition that they should be citizens of Denmark or have the rights of citizens, sufficient base for education by the chosen specialty.

In Poland, problems of higher and vocational education for people with health problems are solved by mean of organization of special and integrated educational establishments. Students with health defects have opportunity to have certain, difficult for their understanding disciplines, been excluded from curriculum. For example, foreign language for deaf students or physical education, art or design for students with defects of nervous system.

One of the most important components of social and mental adaptation to studying at higher educational establishments of students with health problems are their physical condition and physical fitness, that is why attitude of students with special demands to physical education and sport activity in the period of study – is one of the most urgent to-days social-pedagogic problems.

Unfortunately, facts clearly witness that theoretical and methodic principles of physical education of students with health problems have not take proper place in physical education at HEE owing to weak material base. Even to-
day physical culture classes at HEE can not manifest proper content, originality or depth. It is logical that they can not be interesting for youth, cause their motivation to practice physical culture or sports independently, orient them on healthy life style. On the contrary students have wish by any means to avoid such classes [2, 8, 12].

Analysis of special literature, which study different aspects of human being (philosophy, sociology, general and special pedagogic, humanistic psychology, culturology, valueology, anatomy, normal and pathological physiology, general psychology, morphology, genetics and etc.) permits to mark out some concepts, which are the main for formation of personality with special demands, his (her) mental and physical development, socialization and integration in society.

The most important for a person with health problems and for formation of theory and methodic of physical education of students with different nosologies are the following basic concepts:

- Human being is the highest value, independent on health, education or culture[4];
- Person is a holistic being, who combines biological, spiritual, mental and social-cultural principles in their unity [5];
- Human being is a personality, uniqueness of whose is determined by combination of natural features, influence of environments, in which he (she) is formed, characteristics of body and mental organization, temper, intellectual potential, demands, abilities, bents and so on [4, 5];
- Personality is free, inspired being with kindness, justice, sympathy and gracefulness as his (her) natural base [1, 3, 6];
- Personality’s ability for self-cognition, self-development, self-realization and creative activity in all spheres of life, including physical culture [6, 11].

Principles of this process lie in sphere of person’s with health problems self-education, the essence of which mean, first of all, overcoming of own self and different difficulties, connected with nosology.

In specialists’ opinion [1-13], difficulties are subjecting feeling of actually existing contradictions, which, if gradually overcome them, stimulate intensive progress of personality. In process of difficulties’ overcoming, demands, expectations, intentions are realized, with it inner position of personality changes and fixes that stimulate for new motives.

For overcoming of difficulties, conditioned by nosology, two groups of human self-education have been conventionally determined:

First group – categories of personality’s self education, which reflect objective understanding of reasons and after-effects of certain life situation, holistic appraisal of own self, own chances, analysis of settings, value orientations, interests, motives, character of behavior, attitude to own self, to other people and society in general; this group means self-cognition, self observation, self-analysis, self-appraisal;

Second group includes methods and means of self-education of social activity and it is not regulated by time, it continues for all life and includes:

- Self-stimulation for selection of certain kind of activity, appraisal of own potentials, interests and demand;
- Planning and practical mastering of different activities in sphere of physical culture, education, professional activity, personal life in compliance with physical and mental potentials, world-vision, value orientations;
- Will efforts for overcoming of difficulties, self-discipline, requirements to own self, to surrounding people, determination of circle of communication, control of emotions, formation of life style, moral behavior;
- Self-control, correction of physical and mental state, critical appraisal of own actions in realization of plans, analysis of successes and failures, i.e. it means self-stimulation, self-projecting, self-control, self-teaching, self-perfection, self-organization, self-convincing, self-suggestion, self-forcing.

Results of self-education of a person with health problems are: everyday independence (self-servicing), self-realization, self assertion, self-rehabilitation (physical, mental, social), self-actualization. These categories determine the highest level of demands’ realization in activity (domestic, educational, professional, cultural, sports), social recognition of successes, change of social status, freedom from inferiority complex, self-determination of independence, freedom, creativity, own activity.

For physical education of students with health problems such approach is a promising one because all methods of self-education relate both to social and motion adaptation and are realized simultaneously, combining tasks of social and physical development of organism and personality.

Up to recent time the basis of physical education was conditioned by approach, which determined fulfillment of equal for all normative and requirements, which was in contrast to idea of individual human development. Change of educational paradigm to personality-oriented, functioning approach, mastering of cultural norms and values, created comfortable conditions for positive changes in all spheres of an individual [2, 6, 9, 12]. For a person with health problems such approach is the only possible, because numerous nosologies, accompanying abnormalities, not formed motives and demands in motion functioning require personal approach to every individual, choosing and individual way of physical and mental development for him (her).

Disability is, by its essence, a biological phenomenon, but different “boomers”, as I.P. Pavlov called them, can change and transform human social sphere.

In special literature socialization and integration of youth with health problems in society of healthy people is a direction of priority and a purpose of educational activity [1-13]. Main principle is orientation not on defect, nosology, but on human potentials. Main way of socialization is development of mentality, social-cultural, social-labor, social-
domestic adaptation with the help of correcting developing, individually oriented programs of psychological-pedagogic, social and cultural purpose: through educational activity, vocational education, physical culture and sports, interpersonal relations, speech communication, literature, art, aesthetic psycho-therapy, game therapy and other kinds of pedagogic influence.

In spite of this contradiction, physical education of youth with health problems, psychological-pedagogic disciplines have common object and purpose of pedagogic activity, common methodological approaches and principles, solve common tasks from different sides and, that is why, shall mutually enrich and supplement each other.

Ion life activity of an individual, organism’s biological state, including health, reflects social manifestation of personality, the level of his (her) social-cultural, social-labor, social-domestic adaptation and rehabilitation.

Scientists attribute to main categories, reflecting objective laws of biological processes in human organism, the following ones: wholeness of organism, integrity of structure and functions, responsiveness of organism, cause-effect relation, adaptation of organism, compensation [4, 5, 7].

Wholeness of organism means that any disease is suffering of total organism, but holistic character of responses manifests in all organism’s, all his organs’ and systems’ mobilization for recovering, including defensive responses and human vital forces. Physical education, owing to rational motion functioning, activates natural resources, defensive functions and spiritual potentials for fighting with negative symptoms of disease.

Integrity of structure and functions means their continuous connection. In organism structures and functions formed different structural and functional levels of life functioning: molecular, cells’ organs’ systems’. Any pathologic process (loss of eyesight, amputation of limb, nervous-mental disease) – is, at the same time, disorder of structure and function of different levels of organization. Profound understanding of pathologic process, analysis of health state and state of defensive functions permit to objectively estimate physical and mental potentials of an individual, to choose individual strategy of motion functioning’s training and its level increasing. Muscular functioning forms new functional state, which is characterized by adaptation to defect, compensation of disordered functions, by adaptation of vegetative systems to physical load. Positive changes are result of structural-functional reconstruction of organism.

Responsiveness of organism is a universal ability to respond to inner and external irritators. Responsiveness of organism is the main organism in understanding of pathological processes; it determines appearing, process and aftereffect of disease. Individual responsiveness of organism is conditioned by inherited and acquired factors. It depends on sex, age and environment: seasons, sharp change of weather, conditions of labor and educational activity, social and inter-personal relations. Physical exercises for a person with health problems are stimulator of certain organism’s responses that creates possibility to control this process, to cause individually set responses to different kinds of pedagogic influence.

Cause-effect relation in biology and medicine means, that in human vital functioning there are no processes, which would not be conditioned by certain causes. Casualty is not a separate factor but it is an interaction of environment with organism. Result of this interaction is after-effect, which is always inside organism. Etiology and pathogenesis are reflections of cause-effect relation. Etiology interprets questions, concerning causes and conditions of disease, pathogenesis studies after effects of that reason, i.e. progressing and mechanisms of pathological process. One reason can cause a chain of after-effects that, in their turn, become the reasons of new disorders and are secondary, accompanying main nosology.

 Determination of nature, level of organization of disease’s mechanisms, breaching of internal and interfunctional connections permit for a doctor to make diagnosis, for pedagogue – to determine ways of correction work.

Adaptation of organism is a process of adapting to environment and it starts from the date of birth and continues all individual’s life. Adaptation is also a result, achievement of morphological-functional state’s compliance with conditions of functioning, provided by environment. The most fully these problems were elucidated in researches by F.Z. Mayerson [7].

Adapting organism’s responses to changes of internal and external requirements are in the base of adaptation to physical work. With it physical load is an adaptation causing factor, while physical exercise is its structural unit.

Systemic physical exercises result in strengthening of organism’s physiological potentials, in formation of long-term firm adaptation, which is characterized by activation and mobilization of functional reserves, by intensity of structural and functional transformations in organs and tissues, by stability of interaction of regulatory and executive organs [3, 7].

However, there are certain unsolved problems: how to control long-term adaptation of persons with different nosologies in the process of physical education, health-related rehabilitation and sport trainings, in doing of physical load, provisioning of complex forms of organism’s social adaptation to actions in extreme, stressful situations and so on.

Compensation – is one of the most adaptation responses of organism to injures, which manifests in not injured organs’ and systems’ taking on themselves the functions of damaged structures by mean of replacing hyper-function or qualitative changes of function [3, 6]. For example, with amputation of right hand, person starts to use left hand for fulfillment of functions of absent limb. This urgent compensation is important in extreme situations but it is a priori imperfect. Further, in the process of training, of new structurally fixed connections’ formation, there appear skills, which ensure long-term compensation. Similar compensatory processes happen with loss of eyesight, when hearing sharpens and vise versa – with loss of hearing eyesight takes upon itself compensatory function.
Such compensation mechanism is common for all nosologies and can be used in physical training of motion functioning, in creating of training programs, compensating disorders of motion functions and so on.

Motion is the bases of vital functioning. Motion ensures development of all brains’ parts, influences on progressing of human mental abilities [8, 12].

The essence of motion functioning’ cognition is, on the one hand, in determination of biological regularities of human motor system, which developed in the process of evolution, and, on the other hand, in searching of adequate, purposeful means of stimulation of motion functions’ development, determination and improvement of human physical potential.

Deep sense of motion functioning for people with health problems lies in their understanding of essence of physical perfection’s process, which shall accompany a person during all his (her) life, forming his (her) steady motivation, demand in motion in any accessible forms, understanding of attitude to own body and health as to own and social value.

Thus, foundation of physical education’s methodology for students with health problems is scientific-theoretical principles of philosophical-medical categories, which open regularities of organism’s functioning with different nosologies; cultural conceptions of interconnection of biological and social, body and mental in life activity of a person; conceptions of humanistic psychology and pedagogic – recognition of human being as holistic and unique personality, capable to spiritual perfection and creativity, socialization and integration in society, theory of personality’s self-education.

Conclusions:

Our study of problem of students’ with health problems physical education and sports at higher educational establishments, which were described in special literature, can result in the following conclusions:

1. Disablement has no nationality; it does not depend on boarders, faith, sex and age. Disablement is a world problem, which can be solved only by combined efforts of governmental, inter-governmental authorities, social organizations, funds, scientists, educational workers and simply by people, who can not be indifferent.

2. Analysis of domestic and foreign special literature data witness about annual, substantial, gradual increasing of student’s age youth with different nosologies, who have low level of physical condition and are not able to fulfill minimal motion functioning. There is their certain indifference to physical education by traditional forms of its organization at higher educational establishments.

3. Students with health problems have certain problems, which were formed in previous periods of their lives and study and significantly influence on their cognitive, motion functioning and integration in educational environment. These problems are: gaps in knowledge, difficulties in communication with environment, in particular educational one; difficulties in perception of educational material in usual form; reduced workability, increased tiredness, disorders of attention; increased sensitivity to infectious diseases and, connected with it, problems with attending of academic classes; low physical condition; deficit of communication; insufficient orientation in society, low social activity; habit to smooth, forgiving attitude, increased ideas about own abilities; low motivation for achievement of own goals, sense that they have no future; low level of self-actualization, uncertainty, domination of introvert behavior; low self-appraisal, undeveloped self-control; increased anxiety, increased vulnerability, emotional instability, depressive state and etc.

4. In formation of modern system of youth’s with health problem physical education at HEE, first place shall be taken by humanistic ideas and bench marks, which are based on respect to personality, care of his (her) health and progress. Such approach admits recognition of every person with health problems as unique personality, recognition of his (her) rights, attitude to such person as to subject of own development.

5. For students with health problems there shall be created conditions for motion functioning’s training and improvement: special training programs and methods, individual technical aids for studying, considering defects and diseases, and pedagogic, psychological, social and medical aid, without which physical training program’s and professional programs’ application would be impossible. But there are no special state educational standards of physical education for such contingent of students; there is no legal base of students’ with health problems physical education; legal acts concerning adjustment of existing physical culture-sports objects to demands of persons with health problems are not realized; there still exists inequality concerning material encouragement and so on.

6. As on to day there have been no generalizing and, first of all, experimental researches, devoted to training of motion functioning and increasing of youth’s with health problems motion activity, there has not been created clear, pedagogical system of physical culture-sports provisioning during all period of their study at higher educational establishment. There is an urgent demand in formation of dynamic physical education’s system for students with health problems, which would give knowledge about human organism, its motion potentials, effective means on influence on psych-physical state and methodic of their application, of health protection and improvement, which would form demand in healthy life style, physical perfection, active practicing of physical exercises and sports.
References:

11. Talanchuk P.M., Kol'chenko K.O., Nikulina G.F. *Suprovid navchannia studentiv z osoblivimi potrebami v integrovanomu osvitnomu seredovischi* [Supporting teaching students with disabilities in integrated educational environment], Kiev, NAI UkraIne, 2004, 130 p.
13. Shecov A.G. *Sisternij pidkhid do organizaciyi integrovanomu navchannia studentiv z obmezenoiu zhittiediial'noi u vishchomu navchal'nomu zakladakh osviti* [Supporting education students with vital functions in higher education]. *Social'no-pedagogichna reabilitaciia v zakladakh osviti* [Social pedagogical rehabilitation of educational institutions], Khmelnytsky HISTUU, 2009, pp. 22-24.
Information about the author:

Adyrkhaev S.G.: ORCID: 0000-0001-7083-8499; asoslan@mail.ru;
Open International University of Human Development "Ukraine";
Lvov str., 23, Kiev, 03115, Ukraine

Cite this article as: Adyrkhaev S.G. Physical culture in the life of students with disabilities. Pedagogics, psychology, medical-biological problems of physical training and sports, 2013, vol.12, pp. 3-9. doi:10.6084/m9.figshare.879634

The electronic version of this article is the complete one and can be found online at: http://www.sportpedagogy.org.ua/html/archive-e.html

This is an Open Access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited (http://creativecommons.org/licenses/by/3.0/deed.en).

Received: 29.10.2013
Published: 30.12.2013