

**МЕДИЧНА ОСВІТА**

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**IMPLEMENTATION OF CREDIT-MODULE SYSTEM AT HIGHER MEDICAL SCHOOL EDUCATION IN THE CONDITIONS OF MEDICAL SECTOR REFORMING**

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**Abstract.** In the sphere of modern higher education, the following main requirements to the performance level of modern professional of any profile can be distinguished: comprehensive fundamental expertise, capacity to work in the team, fast mastering of new technologies, self-education skills and ability to conduct creative work and research. These qualities of a specialist become the main objectives and reference points in building the modern system of higher education that would contribute to creation of expertise, respective access, management, dissemination and achievement control.

The requirements to medical education are one of the most precise, especially on the background of critical demographic situation in the world, in general, and in Ukraine, in particular. The participation of the Ukrainian system of higher education in the Bologna reforms should be aimed only at its development and acquisition of new quality features without losing the best traditions and decrease of its national quality standards. Orientation towards Bologna process should not cause the excessive restructuring of the national education system. The main aim of Bologna process is to create a unified, all-European, strong and competitive education system (first of all, with the American education system), and expand the possibilities for employment of future professionals.

The European Credit Transfer System was implemented in Ukraine in 2005 and is aimed at the development of national school. This system enables transfer of credits from different educational institutions and it expands the access to the European education, leads to the modernization of European education and provides efficient training of graduating specialists.

Therefore, the higher educational institutions of our country constantly take the measures towards improvement of teaching and education process and methods of education using different forms of knowledge control. Having as an objective the control of education results and evaluation of efficiency of study, the objective monitoring of knowledge and skills that provides for the use of its different forms, becomes an integral part of the educational process.

The Bologna declaration forms the model of European higher education with consideration of the specific features and traditions of the national educational systems. One of the key criteria of the implementation efficiency of credit-modular system of educational process organization is advancement of higher professional education quality. However, the implementation of surgical educational programs has a series of problematic issues.

In the article, we describe the inclusion of the Ukrainian medical education into Bologna process, the stages of creation of Bologna educational system in Ukraine. We introduce the conceptual peculiarities of higher medical education reforms within the context of medical reforms in Ukraine. We have shown the credit-modular system of educational process organization in the Ukrainian education and demonstrated the advantages of credit transfer system in medical education. We also have added to the concept of higher medical school reforms in the context of medical reforms in Ukraine.

**Keywords:** medical education, module, reform, medicine.

**Introduction.** Medical education is an integral part of the Ukrainian national education and health care system. The educational potential of Ukraine is high. Therefore, Ukraine became one of the top ten countries which are leaders in the field of international education, as evidenced by the high demand for higher education in Ukraine by citizens from other countries [6]. The structure of higher medical education in Ukraine is based on the educational systems of the world leading countries according to the recommendations of the European Un-

ion – EU, United Nations Educational, Scientific and Cultural Organization – UNESCO, United Nations – UN and other international organizations [8]. As an integral part of the Ukrainian educational system, higher education in Ukraine is regulated by the Law "On Higher Education", the regulation "On Specialization (Internship)" and the regulation "On Clinical Residence". In 2005, Ukraine joined the European countries in order to harmonize national education according to the requirements of the Bologna Declaration. The introduction of the Europe-

an Credit Transfer System (ECTS) is aimed at the development of a national school, which makes it possible to transfer credits from different educational institutions and broadens access to European education. During the integration of the Bologna system into the national system of education, the Ministry of Education and Science has developed "Temporary Provision on the organization of the educational process in the credit-module system of specialists training" (Order of the Ministry of Education and Science of Ukraine from 23 January 2004, No. 48), as well as the main features of the educational process organization in the conditions of credit-module training were determined (Order of the Ministry of Education and Science of Ukraine from October 20, 2004, No. 812), which changed to the order of the Ministry of Education and Science of Ukraine from September 17, 2014, No. 1050 "On the introduction of a credit-module system of educational process organization". The concept of medical education reformation, alongside the reformation of medicine in general, is in the correspondence of the medical education system with the requirements of the practical sphere of public health care, as well as the improvement of the quality of medical personnel training by introducing an effective system of educational process organization. The reform process should promote the harmonization of national medical education with the requirements of the European Union. Medical education in Ukraine is acquired in three stages in combination of theoretical course and practice. First of all, it is undergraduate education – at least 6 years, 5500 hours, which is followed by postgraduate medical education – from 2 up to 10 years accompanied by continuous professional development. The evolution of medical education is based on the introduction of a qualitatively new methodology for the process organization according to a European model [3, 9].

Modular training is one of the approaches to learning that determine its new direction. It creates the preconditions for the most favorable, comprehensive solution to the challenges, currently faced by medical science and practice. Currently, many prerequisites have been created for ensuring purposefulness and individualization of education, increasing the autonomy of students' educational activity, their activation [1]. A modular high school education was created in the 1960s in the United States, which quickly spread to English-speaking countries and Western Europe. The meaning of the term "modular learning" is associated with the word "module" (from lat. - "modulus") – one of definitions is a "functional node". According to one of the modular training founders J. Russell, the module is a package, which covers one conceptual unit of the training material. In essence, the module is a logically completed part of the training course, which is a large section, has a system of informational and didactic support and ends with knowledge control [5]. The core of modular training is that the student can partly or completely independently work with the individual training program offered to him, while the functions of the teacher can range from informational-controlling to advisory-controlling.

Thus, the fundamental differences between modular and traditional education systems are as follows:

the content of education process is provided in complete, independent complexes – modules, which serve simultaneously as a bank of information and methodological guidance on its assimilation; the interaction between teacher and student in the educational process is carried out with the help of modules, which provide a conscious independent achievement of a certain training level; the very essence of modular learning requires the obligatory compliance with parity subject-subject relations between teacher and student. Basic principles of modular education, which define its general direction, goals, content and methodology of organization are: modularity; structuring of training on separate elements; dynamism; optimality of activity methods; flexibility; awareness of the prospect; variety of methodical counseling.

At the present stage, global system of higher education uses a variety of credit units systems such as the ECTS – European system, USCS (United States customary system) – American system, CATS (Credit Accumulation and Transfer Scheme) – British system, UMAP (University Mobility in Asia and the Pacific – system of Asian and Pacific region. The ECTS system was proposed by the European Commission in 1997. It provides a method of measuring and comparing learning outcomes when transitioning from one higher education institution to another [4, 10].

The ECTS in higher education is intended to solve three problems: to structure curricula of higher educational establishments of different countries in order to ensure their compatibility; improve academic mobility of students; provide academic recognition. ECTS was developed by the SOCRATES/ERASMUS program (1988-1995). She has been tested for six years as a pilot project, in 145 higher education institutions in the European Union. At the initial stage, the system covered five educational directions: management of business, chemistry, history, technical mechanics, medicine.

Credit-module technology of education in medical training is implemented for further humanization and democratization of the educational process; organization of the most rational and effective assimilation of knowledge, skills and abilities with maximum use of individual, individual-group forms of training; stimulation of students for systematic educational work through the free choice of educational disciplines for independent study, creation of the most favorable conditions for students to master the study material as much as possible, organization of modular control and its transformation into an effective mechanism of the managerial process [4,8].

The ECTS system is a formal procedure for quantitative assessment of the amount of work accomplished by a student in the course of studying. It is considered that the minimum number of ECTS-credits corresponding to successfully completed academic year is 60. Thus, in the ECTS, academic year, as a unit of measurement in the system of recognition of documents on education and qualification, is associated with a certain amount of work, which in turn is divided into specific portions - ECTS- credits. In this way, harmonization is achieved between the period of study and the amount of work to be done by the student, on the one hand, and the

volume of material which he has to master, on the other. Therefore, ECTS-credit is the unit of student work measurement (from 1 to 60). The latter includes listening to lectures, seminars, practical and independent work.

It should be noted, that in the national system of education the load is measured in hours of classroom training on one or another discipline, which the student must study. The ECTS rating scale is taken into account to re-evaluate the ratings of a local university under the ECTS-student attestation. It does not violate the usual system of assessments of a local university, but allows you to quickly count the rating of student in case of transition from one university to another. The scores of ECTS ratings are as follows: A- excellent, B-very good, C-good, D-satisfactory, E-least satisfactorily, F-unsatisfactory, some additional work is needed, F-unsatisfactory, with mandatory repetition of course [7, 10].

**Conclusion.** The reform of medicine, which began in 2018 in Ukraine, involves changing of all medical units' structure, from providing emergency care, to the reconstruction of medical care provision to the population. Medical reform involves the decentralization of funding for all its units, and the creation of territorial associations. Therefore, the reform in the medical sector should take place in the context of medical education reformation in general. As medical education in Ukraine has undergone democratization and has entered into the European integration system of education, it is necessary then to improve the methods of graduates' knowledge control. This statement implies the use of not only the knowledge of the Ukrainian medical school, but also the combination of it with European and American. To control students' knowledge, an objective structured clinical examination (OSCE) system, which is widely used in Western medical universities, should be introduced into the medical education system. Implementation of OSCE is intended to solve several problems, first, to make an additional emphasis on the practical training of students; to integrate the teaching of clinical disciplines, establish united rules and requirements; to create clear algorithms for each skill [2].

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### ІМПЛЕМЕНТАЦІЯ КРЕДИТНО-МОДУЛЬНОЇ СИСТЕМИ НАВЧАННЯ У ВИЩІЙ МЕДИЧНІЙ ШКОЛІ В УМОВАХ РЕФОРМУВАННЯ МЕДИЧНОЇ ГАЛУЗІ

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**Резюме.** У сфері сучасної вищої освіти можна виділити такі основні вимоги до підготовки сучасного фахівця будь-якого профілю: широкі фундаментальні знання, вміння працювати в колективі, швидко оволодівати новими технологіями, мати навички самоосвіти і здібності до творчої та дослідницької роботи. Ці якості спеціаліста стають головними цілями та орієнтирами для побудови сучасної системи вищої освіти, яка б сприяла створенню знань, доступу до них, управління ними, їх розповсюдженню і контролю засвоєння.

Вимоги до медичної освіти є чи не найсуворішими, особливо на тлі критичної демографічної ситуації у світі загалом та в Україні зокрема. Участь системи вищої освіти України в болонських перетвореннях має бути спрямована лише на її розвиток і набуття нових якісних ознак, а не на втрату кращих традицій, зниження національних стандартів її якості. Орієнтація на Болонський процес не має призводити до надмірної перебудови вітчизняної

системи освіти. Основна мета Болонського процесу – створити єдину, загальноєвропейську, сильну і конкурентоздатну (перш за все, з американською) системою освіти, а також розширити можливості працевлаштування майбутніх фахівців.

У статті описано входження української медичної освіти до Болонського процесу, етапи створення болонської системи освіти в Україні. Наведені концептуальні особливості реформування вищої медичної освіти в контексті медичної реформи в Україні. Відображено кредитно-модульну систему організації навчального процесу в українській освіті. Відображено світові системи організації навчального процесу. Продемонстровано переваги кредитно-трансферної системи в медичній освіті. Доповнено концепцію реформування вищої медичної школи в умовах медичної реформи в Україні.

**Ключові слова:** медична освіта, модуль, реформа, медицина.

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### **ИМПЛЕМЕНТАЦИЯ КРЕДИТНО-МОДУЛЬНОЙ СИСТЕМЫ ОБУЧЕНИЯ В ВЫСШЕЙ МЕДИЦИНСКОЙ ШКОЛЕ В УСЛОВИЯХ РЕФОРМИРОВАНИЯ МЕДИЦИНСКОЙ ОТРАСЛИ**

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**Резюме.** В сфере современного высшего образования можно выделить следующие основные требования к подготовке современного специалиста любого профиля: широкие фундаментальные знания, умения работать в коллективе, быстро овладевать новыми технологиями, иметь навыки самообразования и способности к творческой и исследовательской работе. Эти качества специалиста становятся главными целями и ориентирами для построения современной системы высшего образования, которая способствовала созданию знаний, доступа к ним, управления ими, их распространению и контролю усвоения.

Требования к медицинскому образованию едва ли не самые строгие, особенно на фоне критической демографической ситуации в мире в целом и в Украине в частности. Участие системы высшего образования Украины в болонских преобразованиях должно быть направлено только на ее развитие и приобретение новых качественных признаков, а не на потерю лучших традиций, снижение национальных стандартов ее качества. Ориентация на Болонский процесс не должна приводить к чрезмерной перестройке отечественной системы образования.

В статье описано вхождения украинского медицинского образования в Болонский процесс, этапы создания болонской системы образования в Украине. Приведенные концептуальные особенности реформирования высшего медицинского образования в контексте медицинской реформы в Украине. Отражено кредитно-модульную систему организации учебного процесса в украинском образовании. Отражено мировые системы организации учебного процесса. Продемонстрированы преимущества кредитно-трансферной системы в медицинском образовании. Дополнено концепцию реформирования высшей медицинской школы в условиях медицинской реформы в Украине.

**Ключевые слова:** медицинское образование, модуль, реформа, медицина.

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