

**CREDIT-MODULAR SYSTEM IN MODERN HIGHER EDUCATION: FACTORS  
ENSURING THE EFFECTIVENESS OF EDUCATION BASED ON AN INTEGRATIVE  
APPROACH**

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**Abstract**

*This article analyzes the theoretical and methodological foundations and practical significance of implementing the credit-module system in the higher education system. The study highlights the content of the credit-module system, its place within the framework of the Bologna process, and its connection with the European Credit Mutual Recognition System (ECTS). Also, the legal basis for the introduction of the credit-modular system based on the decrees and resolutions of the President of the Republic of Uzbekistan in the field of higher education was considered.*

**Keywords:** *credit-module system, higher education, ECTS, Bologna process, academic mobility, modular-rating assessment system, quality of education, independent learning, competency-based approach.*

Today, one of the urgent tasks is the modernization of the higher education system, improving the quality of education, and its integration into the international educational space. In this process, the credit-modular system acquires special significance as the most effective and flexible model for organizing education. This system serves to direct the educational process towards results, strengthen the student's independent learning activity, and introduce transparent mechanisms for assessing knowledge. These tasks are directly related to the priorities defined in the Action Strategy, approved by the Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No. UP-4947 [1], which defines the development of education and science as an important strategic task. Also, in the Concept for the Development of the Higher Education System until 2030, approved by Presidential Decree No. UP-5847 of October 8, 2019, the introduction of a credit-modular system in higher educational institutions, the organization of the educational process based on a student-centered approach, and the expansion of academic mobility are indicated as one of the main goals[2].

The basis of the credit-modular system is the modular educational approach and credit units. In the modular approach, academic disciplines are divided into logically completed content modules, and each module is aimed at the acquisition of certain knowledge, skills, and competencies by the student. Credit units represent the total amount of labor expended by the student during their educational and scientific activities. This allows for precise planning and control of the educational load.

**ANALYSIS OF THE LITERATURE ON THE TOPIC**

The importance of the credit-modular system in higher education and the issues of its implementation have been widely studied by domestic and foreign scientists in recent years. These studies are mainly aimed at organizing the educational process based on a student-centered approach, planning the study load through credits, and improving the mechanisms for assessing knowledge.

In foreign scientific literature, the credit-module system is interpreted as a key component of the Bologna process. In the ECTS Users' Guide, developed by the European Commission, credit units are

interpreted as a universal unit of measurement representing the student's total labor input, and mechanisms for comparing and recognizing learning outcomes through credits are highlighted[3]. These sources emphasize that the credit-modular system is an important tool in ensuring academic mobility and increasing the transparency of educational programs.

In domestic studies, the issues of adapting the credit-modular system to the higher education system of Uzbekistan are widely covered. In particular, Khusanov A. and Karimova D. analyzed the advantages of the modular-rating assessment system in their scientific works and substantiated that the assessment of knowledge based on a 100-point scale objectively reflects the results achieved by the student during the semester. In their opinion, this system serves to increase the activity of students in the educational process. In the research conducted by A. Abdurakhmanov, the credit-modular system was analyzed in close connection with the competency-based approach. The author emphasizes that through loans, it becomes possible to accurately determine and evaluate the results of education, and this process serves to train personnel who meet the requirements of the labor market[6].

Analysis of the studied literature shows that the theoretical foundations of the credit-modular system are sufficiently covered, an assessment of the practical effectiveness of the process of its implementation in higher educational institutions of Uzbekistan has been carried out, and mechanisms for solving emerging problems and their elimination have been developed.

Credits were initially introduced in U.S. universities between the 18th and 19th centuries, part of the process of liberalizing university education. As a result of establishing quantitative equivalents of the content of education and the level of mastery of educational programs through credit units, students gained the opportunity to independently plan the educational process. This led to fundamental changes in the quality control and assessment systems of the educational process and created favorable conditions for improving educational technologies. At the time of signing the Bologna Declaration, ECTS (European Credit Transfer System) was recognized as the most acceptable among the existing credit systems in Europe [7].

The number of ECTS credits for the academic discipline is determined by dividing the total number of hours allocated to studying the discipline by the credit value (rounded to 0.5 credits). For example, if 108 hours are allocated for studying a subject, this equals three credits. In this case, the subject consists of three modules. The most convenient way is to determine the share of each subject in the total workload by the number of classroom hours and to proportionally distribute the 30 credits to be mastered during the semester among the subjects studied in this semester. It is recommended to convert the study load into credits by dividing the total (classroom and independent) study load for the semester by a coefficient of 36 (36 hours of total workload). A bachelor must accumulate at least 180 credits (three years according to the credit norm) or at least 240 credits (4 years); a master must accumulate a total of at least 300 credits. Consequently, the duration of master's studies will depend on the duration of undergraduate studies [8].

Within the framework of the credit-modular system, the procedure for assessing students' knowledge is carried out as follows. According to the rules of the Bologna Process, it is normal to provide students with loans for internships and internships, as well as for exam preparation. Indeed, this is a somewhat labor-intensive practical learning activity, and it is important to objectively assess its scope as much as possible. Undoubtedly, students should also receive credits for writing essays and coursework, which include the study of many sources, since the academic labor intensity of this type of work is quite high. Credits are awarded to a student only after successfully passing the form of final control specified in the curriculum (such as an exam, exam, test, or final control work) [8].

The modular-rating system for assessing knowledge provides for a 100-point scale. On this scale, 100 points is the highest academic indicator that a student can achieve in the process of studying a content module. When assessing student knowledge in the content module, grades received for all types of classes, current and final tests (for example, performing practical and laboratory classes) are taken into account, taking into account weighted coefficients. The general assessment of the assimilation of the subject's educational material is determined as a holistic assessment of the level of assimilation of all content modules, taking into account weighted coefficients, without a semester exam. Assessment of students' knowledge in subjects for which an exam is provided for in the curriculum is carried out based on the results of the current module control and the final module control (exam). Current module control consists of content modules and is conducted by a teacher conducting practical, laboratory classes, or seminars. Current (modular) control includes: elements of theoretical knowledge and practical skills in the process of mastering the educational material; control tests (tests, oral questioning, written control work). At the beginning of the semester, the teacher is obliged to convey to the students the types of tasks, a list of questions covering the content of the subject program, as well as the criteria for assessing knowledge in the current and final control of the module. The results of the assessment of the level of students' knowledge are assessed in the range from 0 to 100 points for tasks of current modular control in academic disciplines, which are carried out based on the results of current modular control (i.e., testing). The final score based on the results of the current module control is the basis for conducting a test in this subject. The instructor has the right to conduct the test if the student scores at least 50 points on a 100-point scale for the current module control. A student who fails to score 50 points based on the results of the current module assessment must pass the test [9]. A student's academic achievements are determined using the knowledge assessment system used in higher education institutions, but grades must be aligned with the national scale and the ECTS scale.

One of the important advantages of this system is increasing the student's activity in the educational process. In traditional education, the main focus is on classroom activities, while in the credit-modular system, independent work of students, practical classes, projects, and scientific research are of paramount importance. As a result, the student is formed not only as a master of ready-made knowledge, but also as a specialist who thinks independently, can analyze problems, and has the ability to make decisions.

### **RESEARCH METHODS**

The credit-modular system also serves to ensure the principles of transparency and fairness in the educational process. The level of students' knowledge is assessed based on a modular-rating system and is determined on a 100-point scale. In the assessment process, the results of current and final assessments, practical and laboratory classes, independent assignments, and scientific activities are taken into account. This makes it possible to assess the student's knowledge not based on the result of a one-time exam, but on the results achieved during the semester.

Another important aspect of this system is ensuring academic mobility. International recognition of credits creates conditions for students and teachers to easily move from one higher educational institution to another, as well as to foreign universities for studying or exchanging experience. This process is one of the main goals of the Bologna Process and is carried out through the European Credit Mutual Recognition System (ECTS).

The credit-modular system also allows for the flexible organization of educational programs. The student has the right to choose subjects based on their interests and professional plans, independently

plan the study load, and form their own individual educational trajectory. This contributes to the training of competitive personnel who meet the requirements of the labor market.

The credit-modular system also creates favorable conditions for the development of distance and blended forms of education. The high share of independent education allows for the widespread introduction of electronic educational resources, online platforms, and digital technologies. This serves the effective organization of the educational process based on modern information and communication technologies.

### **RESULTS**

The research results showed that the credit-modular system serves to organize the higher education process more effectively and transparently. In this system, academic subjects are divided into logically complete modules, and each module is oriented towards specific learning outcomes. This allows for the gradual formation of the student's knowledge, skills, and competencies. Credit units reflect the total amount of labor expended by the student, along with classroom activities, for independent study, practical work, project work, and scientific research. As a result, it becomes possible to fairly distribute and control the educational load. Also, a 100-point grading system based on a modular rating allows determining the level of student knowledge based on the results achieved during the semester. This assessment takes into account not only the final exam, but also current assessments, independent assignments, and practical exercises.

### **CONCLUSION**

The credit-modular system plays an important role in the modernization of higher education, improving the quality of education and its integration into the international educational space. This system develops the student's independent learning activity, ensures transparency in the assessment process, and serves the training of competitive specialists. Consistent implementation of the credit-modular system is an important factor in the future training of personnel with modern knowledge and skills.

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