

## Improving the Quality and Efficiency of Teaching Descriptive Geometry in a Credit-Modular System

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**Abstract:** In given article is considered increasing quality and efficiency education to descriptive geometry on high educational institutions on credit-module system.

**Keywords:** Descriptive geometry, credit-modular system, quality, efficiency, methodology, knowledge, skills, skill, independent learning, spatial imagination, means.

It is known that the development of science and technology, technological processes with high efficiency, automation and computerization of production-all this is inextricably linked with "Descriptive Geometry and engineering graphics". These processes place great demands on all spheres of human activity, especially on the skills of the younger generation to receive and reproduce visual information and describe it by graphic means.

In connection with modern requirements, a number of responsible tasks are also assigned to specialists-scientists and teachers of graphic education in various disciplines. In particular, the improvement of the program, textbooks and teaching aids at the level of the requirements of the current period, the training of teachers is one of the urgent tasks.

In addition, our country pays great attention to the field of education, in particular the development of higher education. In order to improve the quality of education in the developed countries of the world and in the universities of our country, the process of transition of the educational process to a credit-modular system continues.

Today, the most important task facing the higher education system is the training of a qualified specialist. To prepare such a specialist, it is necessary, of course, to determine the system of requirements imposed on him. In our search for an answer to this question, we encountered a system of requirements in the following four areas:

1. Acquiring the necessary knowledge, skills and abilities in your field;
2. Constantly improve the existing knowledge in this area, that is, be ready for independent learning;
3. Have the skills of independent research and creativity to innovate in the industry;
4. Be able to plan your time, manage it and organize your activities.

In the Message of the President of the Republic of Uzbekistan The Supreme Council, it is planned to set the duration of training in 6 areas of pedagogical education in 3 years from this year. Among these areas is the educational field "Fine Arts and Engineering graphics".

Improving the standards of higher education based on foreign experience, revising the directions of education and the disciplines taught. 2-fold reduction in the number of disciplines that are not related to the specialty. In higher education, the transfer of the educational process to a credit-modular system is required.

Credit - (European Credit Transfer and Accumulation System) (ECTS) (European Credit Transfer and Accumulation System), which becomes a credit unit. This system successfully passed research in European universities in 1989 and was adopted.

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The purpose of the credit system is to increase the transparency of education and promote the recognition of academic knowledge and qualifications.

Initially, the loan was used for students from abroad, and it was trusted. The establishment of uniform credits for higher education institutions helped to ensure the mobility of students. Today, the European credit system is a recognized and functioning system in almost all European countries. The student will be able to get a diploma only if he / she gets the established credit points.

There are several types of credit systems in the world's higher education system. Along with the above-mentioned ECTS, there are credit systems USCS-the American credit system, UCTS-the British credit system, CATS - the countries of Asia and the Pacific region.

The successful operation of the credit-modular system depends on many factors, including educational and material support, a basic textbook that meets international standards, certain conditions for the organization of independent work of students (computer classes, video tutorials). In the credit system of training, it is important that a higher educational institution has access to all necessary information resources in the course of training: an educational and methodological manual, an electronic textbook, handouts, and online educational resources.

Educational direction "Fine arts and engineering graphics" it is necessary to analyze the curriculum and taught disciplines for their compatibility with the curricula of leading universities of foreign countries of the corresponding educational directions, to form the subject composition, frequency, set the duration of academic semesters, the amount of credit allocated to subjects, to develop evaluation criteria.

Descriptive geometry is a branch of general geometry that studies their shapes, sizes, and relative positions using methods for depicting objects based on their geometric properties, as well as algorithms for solving positional metric and structural problems.

Descriptive geometry differs from other geometries in its main method-the image method. It expands the student's spatial imagination with its visualization techniques, helps to create images and read pre-made images, as well as solve engineering problems [1].

Analysis of the disciplines of the curricula of the relevant educational areas of leading universities in foreign countries shows that in order to become a specialist in graphic representation, the subject of "Descriptive Geometry" should be among the mandatory subjects.

To teach the subject descriptive geometry according to the module-credit system, it is necessary to form a sequence of topics, the unity of modules and the program of the discipline. On the basis of the subject program, it is necessary to develop a new generation of educational literature, methodological manuals for independent training of students, educational and methodological complexes, evaluation criteria.

With modular training, it is possible to provide step-by-step training by completely shortening and in-depth differentiation of training programs. That is, it will be possible to individualize training. When switching to modular training, the following goals are pursued:

- ensuring the continuity of training;
- individualization of training;
- creating sufficient conditions for independent learning of educational material;
- accelerate learning;
- achievement of effective assimilation of the subject.

It is planned that 50% of the total load allocated to the subject will be allocated to the audience, and 50% - to self-education. Therefore, a set of tasks for independent learning of students, thematic animation, tests included in the computer, workbooks, the use of information technologies in the



educational process serve to improve the quality and independence of teaching the subject of descriptive geometry.

In conclusion, we can say that when translating the educational process of the educational direction "Fine Arts and Engineering Graphics" for 3 years and credit – modular system, the teaching staff faces great challenges. To train high-quality personnel in the field of fine arts and engineering graphics in the shortest possible time, it is necessary to follow the above recommendations, study foreign experience and use an innovative approach.

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