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# Problems of Modernization of Curricula for Teaching "Descriptive Geometry and Engineering Graphics" in Higher Education Institutions in the Field of Architecture and Construction and Technical Education

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***Abstract:*** *This scientific article discusses the problems of modernization of curricula for teaching the subject "Descriptive Geometry and Engineering Graphics" "Strict transition to modern advanced technologies, modern production structures, complex processing of mineral resources and requires the formation of a system of industries for the production of finished products, which requires a lot of knowledge".*

***Key words:*** *modernization, technology, resource, complex, algorithm, modeling, animation, multimedia, Auto CAD, Archi CAD, 3DS MAX, geometric constructions, interior, construction, graphics, constructor, innovation, technology*

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## Introduction

The process of technical and technological modernization in our country depends on the technical literacy of personnel. This article presents algorithms and methods for solving problems of adapting curricula to modern educational standards by revising the theoretical and practical foundations of the subject "Descriptive Geometry and Engineering Graphics" in the teaching of students studying in the field of construction and vocational education. are given.

The globalization of the exchange of information, as well as the rapid growth in the quantity and quality of scientific innovations in science, technology and industry, in itself allows students to quickly and in detail provide information about them. puts on the agenda. Positive satisfaction of this requirement is achieved, first of all, in the educational process, which is a convenient, acceptable form of acquisition of scientific, theoretical and practical knowledge.

## Materials

Students' strong graphic literacy helps them develop their thinking skills and spatial imagination, develop their creative abilities, and develop their scientific and technical creativity and ingenuity.

Teaching the subject of "Descriptive Geometry and Engineering Graphics", in-depth knowledge of this subject is important in preparing the younger generation for the more advanced age of technology. It is impossible to imagine life in the present and in the future, in general, in every sector of the economy without technology.

Therefore, the first President of the Republic of Uzbekistan IA Karimov pays special attention to the creation of a structure to protect and strengthen the economic and political independence of our country and to facilitate this. To do this, it is necessary to completely and radically reform the national economy. requires the formation of a system".

It is known that the construction industry is multidisciplinary and specializes in construction. Theoretical bases of these construction specialties are taught in the subject "Descriptive Geometry and Engineering Graphics", which is the basis of training of designers and constructors. Curricula for these construction specialties are based on the following algorithms:

- Theoretical and practical training that builders should know about geometric constructions;
- projection techniques that help to develop and improve spatial imagination;
- Conditions used in construction projects;
- rules of drawing up, execution and performance of construction projects;
- Rules for drawing up and reading construction drawings;
- Rules of placement of the equipment used in interiors of buildings.

It goes without saying that all this drawing and design work is carried out in specially equipped rooms and laboratories equipped with equipment directly related to drawing.

**Methods**

In view of the above, the fate of humanity in the emerging and globalizing modern information society depends on the correct organization of computer training aimed at the exchange of information, the learning process and the mastery of this tool by all people involved in production. depending on. Algorithms for step-by-step mastering of the subject through a set of exercises for mastering the subject were created through the textbooks that teach the subject "Descriptive Geometry and Engineering Graphics", which form the basis of the above topics. When creating two- and three-dimensional drawings (ALT) using "Computer Graphics" programs that meet international educational standards, using Auto CAD, Archie CAD and 3DS MAX, create all the drawings needed for the construction of buildings and structures, as well as project estimates. documents can be completed.

**Results**

The following model is used with the help of computer graphics for the student to know the laws of interconnection of building structures and objects on the computer.

This diagram visualizes event process models by entering engineering parameters.

On the basis of modeling it is possible to prepare practical graphic animation, design and construction documents.

All three-dimensional objects are made up of surfaces, and whether they are hollow or full does not affect their geometry.

In the learning process, the teacher and the students need to communicate in a lively language, exchange ideas, respect each other and work closely together to achieve the main goal.

Teaching graphic geometry and engineering graphics using modern innovative technologies in the formation of graphic literacy of students leads to an increase in students' mastery of the subject.

**Discussion**

To do this, pay special attention to:

- conducting the teaching process in a combination of computer and modern pedagogical technologies;
- Development of software and pedagogical tools for drawing;
- use of animation and multimedia (movement of shapes in the direction of drawing, the use of sound effects);
- use of three-dimensional graphics programs;
- Ensure the proportionality of manual and computer graphics. Curriculum development includes individual assignment options for independent assignments in Descriptive Geometry and Engineering Graphics, which help students improve their thinking, imagination, design, execution, and reading skills.

The curriculum is intended to serve as a methodological guide for existing teachers.

**Conclusion**

For this reason, the lessons should be organized in such a way that under their influence, students are able to form and develop different views, scientific thinking and beliefs in the subject.

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