AUTOCAD SOFTWARE FEATURES FOR 3D DESIGN

Fayziyeva Salomat Gaybullaevna
Termesi Professor of the department «Visual arts» of the pedagogical institute.
salomatgaybullayevna@gmail.com

Annotation: This article presents information about modern requirements for teachers «drawing», the possibilities of AutoCAD program and the advantages of works created in this program.
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Today, pedagogues are required to acquire deep knowledge not only in their field, but also in modern information technologies, and to teach them to young people, especially pupils and students. Therefore, it is the duty of every professor and teacher working in general education schools, KHK and higher educational institutions to use modern graphic programs and teach pupils and students to work on a computer. Based on today's requirements, teachers of engineering graphics should have basic knowledge of at least five modern graphic programs and know how to design drawing prototypes on a computer using them, i.e. Photo Shop, Corel Draw, 3D MAX, AutoCAD and Flash. Because it is impossible to imagine the development of any modern educational electronic manuals without these programs.

Therefore, in order to perfectly create electronic training manuals, it is necessary for teachers of drawing of the 21st century to have at least a preliminary understanding of the graphic programs listed above.

The first to solve the problem that we set before ourselves, the AutoCAD system, which is now considered the international standard for automated drafting, is still popular among graphics programs, almost 30 years after its creation. AutoCAD is an excellent and popular automated design software that can create any type of schematics and drawings with high accuracy and quality. It also guarantees the full realization of the creative potential of the users of this program. For this reason, millions of designers, scientists, engineers and students, that is, from more than 80 countries of the world, in 18 languages, use the AutoCAD system as a matter of routine.

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Therefore, this lesson aims to introduce the possibilities of three-dimensional design of simple geometric objects on a computer using the AutoCAD program and to teach algorithms for using their commands.

It is known that making clear images in engineering and construction architectural drawing, especially making lines formed by the intersection of surfaces, requires a lot of graphic operations, that is, spending a lot of time.

Modern computers and their software provide an opportunity to easily design graphic information in three dimensions. There are a number of graphic programs for this, among which the AutoCAD program provides the ability to perform two- and three-dimensional design works with high accuracy based on the given dimensions for engineering and construction architectural drawing.

Although computer-aided three-dimensional design is somewhat more complex than two-dimensional design, it has the following advantages:

1. Automatic execution of mutual intersection of object surfaces;
2. Change the mutual situation of the objects by transferring them to the main and additional views;
3. Painting the surfaces of objects in natural colors;
4. Analysis and development of completed three-dimensional rendered-painted objects in the requirements necessary for production;
5. View and observe the created three-dimensional model-item from any point in space.

Most importantly, the process of formation of this knowledge relies on the activity of the right hemisphere of the brain. As a result, the student's conscious mental perception activity is formed and creative. Therefore, the implementation of illustrative and cognitive functions of computer graphics not only serves as one of the factors that encourage students to think, to have a creative approach to images, but also plays an important role in the implementation of new ideas in students' thinking. plays, develops potential.

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