



## ACHIEVING EFFECTIVENESS IN TEACHING ENGINEERING COMPUTER GRAPHICS

**Submission Date:** October 10, 2023, **Accepted Date:** October 15, 2023,

**Published Date:** October 20, 2023

**Crossref doi:** <https://doi.org/10.37547/pedagogics-crjp-04-10-07>

**Journal Website:**  
<https://masterjournals.com/index.php/crjp>

**Copyright:** Original content from this work may be used under the terms of the creative commons attributes 4.0 licence.

**Umrzok Qabiljonovich Rustamov**

Teacher Of Department Of Visual Arts And Music Education, Faculty Of Social And Humanities, Andijan State Pedagogical Institute, Uzbekistan

### ABSTRACT

In the article, when choosing subjects of engineering computer graphics, training students to draw primitives on a computer, monitoring the knowledge, skills and abilities of students in the specialty, transferring relatively small graphic images with a very large amount of information in drawings, educational engineering graphics. The quality of learning material by lim students, the implementation of approaches to self-control, and the formation of the need for mutual and self-control are covered.

### KEYWORDS

Engineer, computer, graphic, drawing, primitive, education, knowledge, skill, skill, image, information, material.

### INTRODUCTION

Today, in the rapidly developing modern education system, new forms of teaching organization have emerged. One of the new forms of educational organization is computer graphics using the traditional educational environment (AutoCAD). Monitoring the knowledge, skills and abilities of students of fine arts and engineering graphics is the main goal of the subjects of engineering computer graphics, identifying their achievements and successes, indicating ways to

improve them, based on this, students need to create conditions for effective creative activity.

Students of the faculties of fine arts and engineering graphics in the education system with a drawing-oriented approach consider it important not only to teach, but also to develop the student's personality, knowledge, skills and competencies in teaching, a competency-based approach, the need to take into account individual abilities and personal qualities are recognized.



The main task of engineering computer graphics is the graphical representation of information. Graphic writing is considered as the literacy of human visual culture and today is widely used in the practice of almost all spheres of human activity, such as engineering, technology, education, medicine, industry, design and design. If we take into account the fact that relatively small graphic images (drawings) can convey a large amount of information and that all information about the object depicted in this information is fully covered, then engineering computer graphics is one of the simplest and natural tools for human communication in professional and everyday life, we can look at it. When choosing topics for classes in engineering computer graphics, it is advisable to start by teaching students how to draw primitives on a computer. Because users who have mastered drawing primitives on a computer can also create images of any complexity on a computer.

The main goal of learning in personalized learning is to develop the knowledge of each student by identifying his personal abilities and further help him become a master of his profession. This goal is related, first of all, to the quality of educational materials for students of the faculties of fine arts and engineering graphics, that is, the knowledge, skills and abilities specified in the curriculum for engineering computer graphics, associated with the level of acquisition of skills. On the other hand, this is associated with clarifying the main goal of engineering computer graphics management, the implementation of mutual and self-control approaches, and the formation of the need for mutual and self-control. Thirdly, this goal is aimed at developing positive personal qualities in students, such as showing responsibility for the work done.

In order to achieve the effectiveness of teaching engineering computer graphics in higher educational

institutions based on pedagogical interactive educational technologies:

Paying attention to the free thinking of each student and his ideas, the teacher of engineering computer graphics considers the effectiveness of the educational process to be the main criterion;

development of spatial, figurative, logical imagination and thinking;

achieve the development of students' abilities in the classroom;

is able to make independent decisions when solving scientific problems in his specialty and be able to use them in his professional activities;

make lessons more professional and free, develop self-development of communication skills;

taking into account their psychological, personal characteristics and abilities when enrolling students;

have independence, initiative, hard work and other qualities;

draw up practical recommendations and reports on the use of scientific research results;

It is necessary to ensure the personal interests of students in each activity.

It is known that any graphical information consists of points, sections, lines, polygons, circles and a set of curves that can be composed in different ways. This is done by coloring them, giving them shape and sharpening the lines, making connections by drawing a circle, removing the extra lines, moving the image, multiplying it or creating a rotationally symmetrical image, writing text, setting the size and done. The goal is to teach practical use of commands such as editing drawings and written text, and to improve computer drawing skills.



## REFERENCES

1. Haqberdiyev, B. R. Projection method in the integration of design elements and engineering graphics and design sciences. NAUKA i OBshchestvo, 110.
2. Haqberdiyev B. R. Social and didactic factors of integration. News of UzMU, No. 1/7. 208-211 p. 2023
3. Haqberdiyev B.R. The role of design and engineering graphics in improving integrated education. NamDU scientific newsletter. -2022. No. 6 – hip. 1028-1032 p.
4. Haqberdiyev B.R. Important tasks of an integrative approach. OZMU NEWS, 2022. 1/10 - issue. - B. 175-177.
5. Rustamov U.Q. Improving the methods of using graphic programs when teaching drawing in engineering graphics. The American Journal of Engineering and Technology 2023y. Volume 05. ISSU E09. Pages: 10-12.
6. Haqberdiyev B.R, Rustamov U.Q., (2021). Creative design of buildings and structures. Current Scientific Journal of Pedagogy, 2(09), 76-78
7. Ismatullayeva, N. R. (2022). POSSIBILITIES OF USING THE INTERACTIVE BOARD IN FOREIGN LANGUAGE LESSONS. «O‘ZBEKISTON-XITOIY: TARIXIY-MADANIY, 77.