

MODERN TECHNOLOGIES IN LAYOUT

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ABSTRACT

This in the article architecture and design in the field layout in the process used modern technologies , their advantages and education in the process place illuminated . Also , 3D printers , digital modeling programs and automated working release methods practical application analysis will be done.

Introduction. Architecture and design in the field layout is project of the idea physical expression through it building or of the structure shape , size and structure is displayed . Traditional layout hand to work based if so , today on the day this process modern technologies with complete is being digitized .

Computer programs and 3D technologies current to be layout much fast , clear and visual in terms of richer did . This own in turn architect and designers of activity efficiency is increasing .Main part.

1. In layout digital technologies role

Modern in layout computer using design (CAD) programs main in place AutoCAD , SketchUp , Revit , Rhino , Blender such as programs through architecture of objects virtual models is created .

This programs :

- * project dimensions accuracy with represents ;
- * various constructive solutions try see opportunity gives ;
- * 3D views and visualizations prepares .

2. 3D printers and their possibilities :

Last 3D printers in the years architecture education and in practice important place They took over . using plastic , plaster or other from materials realistic models high in accuracy print to grow possible .

Advantages :

- * project short within the period preparation ;
- * details perfect in accuracy expression ;
- * working release expenses reduce ;
- * ecological cleanliness to provide .

3. Virtual and expanded truth technologies

Virtual Reality (VR) and Augmented Reality (AR) technologies layout to the process new size Architect now project physical and digital in space also try vision possible .

Through VR customer or student building inside virtual to " walk " regularly it is possible , this and the design further more precisely to understand help gives .

4. Education in the process layout technologies

High education in institutions layout science in teaching modern from technologies use students creativity , technical thinking and professional competencies develops

For example , SketchUp or Blender in programs created models later 3D printers using realistic to the layout is converted .

Conclusion. In layout modern technologies are architecture and design of the field inseparable part is a project quality and education efficiency in increasing important importance profession Digital modeling , 3D printing to grow and VR technologies layout process new to the stage take is coming out

References:

1. Karimov , A. (2023). Architecture layout Basics . Tashkent .
2. Autodesk Inc. (2024). AutoCAD Architecture User Guide .
3. UN- Habitat . (2023). Digital Design oath Smart Cities .
4. Kholmatova , D. (2022). 3D technologies and their architecture in education place . Opposite
5. SketchUp Official Documentation (2025).