The importance of modern computer technology in the university education system

Application on the computer graphics course for the second year (group 2)

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Abstract

The world in the current era is standing at the big door of a scientific and technological development for use of computers in the design process, and this matter has greatly contributed to the progress of generations by helping them acquire the necessary tools and skills that help them easily access innovative and contemporary designs, and encourage them to distinguished scientific production and make The learning process is more enjoyable by linking the course applications to the field of specialization. The modern educational process requires keeping pace with the labor market and meeting the graduate's needs for tools that enable him to excel in his field of work. Students must practice educational science closely related to the requirements of specialization, that is, be able to do the work that they do, and university education aims to achieve many things, the most important of which is the acquisition of skills that enable the student to keep pace with the requirements of the labor market.

The curricula of the glass program at the College of Applied Arts are divided in the four years of the study in terms of objectives into courses that develop the creative side and other courses aimed at building the scientific basis for the student, and other materials that qualify the student to acquaint the student scientifically and practically with the different production methods of glass, in addition to the courses that help build the innovative side of The student.

Keywords:

Computational design , the design process , computer graphics

search terms:

Computational Design:

Computational design is the application of computational strategies to the design process. While designers traditionally rely on intuition and experience to solve design problems, computational design aims to enhance that process by encoding design decisions using computer language. The goal is not necessarily to document the end result, but rather the steps needed to create that outcome. .

General concepts about computer graphics course:

With the development of various digital tools, computational design has become one of the most important technologies developed in design programs through multiple programs. The details of the treatments, the computational design opens up a new set of opportunities that enable the designer to study the causes of problems and their relationships with other elements and rely on them directly. This shift in design and creative thinking allows design ideas to

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accommodate change, diversity and various human activities without specifying specific functions. These designs are unexpected events regarding the overall glass spheres.

Hence, the objective of the Computer Graphics course was to develop students' ability to:

1. Realizes the importance of using computers in the field of design.
2. Distinguish the role of computers in design practice and the production process of glass designs.
3. Training on the Rhino program and how to apply glass designs while employing them in the user environment.

Results :

Through this research, the following results were reached:

• Clarifying how to link the elements of the Computer Graphics course with the three fields of glass as well as the curricula.

• Developing students' innovative ability by activating computational design techniques in teaching computer graphics, "which is the first step in the student's acquisition of design skills through computers," whether technical, architectural or industrial.

• Activating computational design techniques by teaching a computer graphics course to emphasize the advantages of using the computer in the design process and combining speed and proficiency.

• The study showed the importance of defining appropriate and organized scientific foundations to be followed during computational design as one of the important elements affecting the development of the design process in general and glass design decisions in particular. By linking the course to the three fields of glass and strengthening them, and improving student outcomes.

• A set of diagrams has been developed as a comprehensive and objective visualization that represents the educational process of a computer graphics course in developing the capabilities and skills of students as a prelude to owning design tools and linking them to the university education system for the purpose of developing them.

• Analytical tables have been developed for the students' final output according to the targeted learning outcomes, to identify the extent to which the student has achieved the foundations of the computational design process and its impact on his outcomes.

• Finding mechanisms to link the university education system with modern technologies in order to develop the design process.

• Achieving the goals of the university education system will not be possible unless there are mechanisms to link it with modern technologies by liberating the teaching process from traditional methods and trying to keep pace with the design and creative development without controlling and curtailing the potential of students and giving them the necessary tools to keep pace with the labor market and applying the results of that system on the ground. after graduation.

Recommendations:

• The computational design (Rhino program) contains tools and capabilities that serve the graduate of the College of Applied Arts in an excellent way. It is unfair to teach all these tools in one term. It is better to teach this course throughout the entire year.
• Activating the objectives of the university education system to reformulate academic courses to serve the needs and capabilities of the student within the framework of the actual needs of the labor market

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