CGI in interior architecture

The programme requires students to be familiar with a polyhedron modeler and software used for rendering based on ray-tracing.

The aim of the programme is to equip student with knowledge and skills necessary to prepare architectural models with the use of SketchUp programme and photo-realistic presentations of interiors and designed products.

The programme encompasses:

1. 3D modeling with the use of SketchUp.
2. Photo – realistic rendering with the use of V-Ray, post-processing and compositing.

CGI in interior architecture and product design

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<u>Ergonomics and Anthropometry</u>

The aim of the programme is to develop students' earlier acquired skills: during the design process students are expected to take into account human needs and possibilities in the area of anthropometry and to be able to consciously shape handles used in everyday objects. An equally strong emphasis is put on developing their ability to choose appropriate characteristics and anthropometric determinants necessary for defining correct qaw dimensions. It is important for the students to understand the essence of ergonomics and the need of applying its principles in design. It is extremely significant to develop students' awareness of correct and incorrect practical solutions in the field of user-centered design.

The programme encompasses:
1. Discussing issues connected with functioning of a human hand.
2. Discussing issues connected with movement, force and elements of biomechanics.
3. Characteristics and classification of movements performed by the upper limb.
4. Speed and accuracy of movements performed by the upper limb.
5. Mechanics of hand movement, adjustment of tools to the shape of a human hand, grip quality, methods of determining the level of adjustment.

6. Classification of grip types.
7. Discussing and presenting interesting solutions functioning on the market.
8. Quality analysis of handles used in already existing products – a project verifying the form and level of adaptation.

The programme combines theory with practice. Each assignment or analysis is preceded by introductory lectures and/or several group discussions. For the end of semester students are obliged to produce a model (scale 1:1) and a plate.

Introduction to Computer Aided Design

The programme requires students to be familiar with Windows operating system.

Computers and graphic software are tools indispensible in the work of a designer. They significantly accelerate, facilitate or enable putting ideas into the stage of presentation, scale model or prototype. However, the skillful use of software is incomplete without the context of its use – the specifics of the profession of a designer, the type of a designing problem. Therefore, the aim of the programme is not only to equip students with technical skills necessary to use 2D and 3D software but also to make them familiar with the chosen aspects of the field in which these tools are used.

The programme encompasses:

1. NURBS modeling with the use of Rhinoceros software.
2. Photo-realistic rendering with the use of V-Ray render.
3. Correction and separation, colour management and preparation for print.
4. Basics of technical text editing.
5. Basics of computer typography.
6. Typesetting with the use of InDesign software.
7. Methods of prototyping computer models.

Computer Aided Design

The programme requires students to skillfully use Rhinoceros, V-Ray, Photoshop, Illustrator and InDesign software.

The aim of the programme is to develop students' knowledge and skills connected with computer techniques used in design cycle, but first and foremost – the use of computer techniques in an integrated manner in the whole designing process.

The programme encompasses:

1. Advanced NURBS modeling with the use of Rhinoceros software.
2. Advanced photo-realistic rendering with the use of V-Ray render.

3. A holistic approach to modeling and presenting a product – from defining the design problem/range of objects for modeling, through concept sketch/formal and functional analysis of a model to individual creation of a computer model, photo-realistic presentation and preparation of the presentation for the examination.

Students are expected to analyze problems concerning object modeling or creating graphics and to adjust their manner of work and optimal work methods to the given assignment.