



Course name	Computer Assisted Design
Entity running the course	Faculty of Interior Architecture and Design
Entity for which the course has been prepared	Department of Design
Course type	Obligatory / optional
Year of study / semester, type of studies	Year III, sem. V, full-time basic degree studies
ECTS credits	2 pts ECTS
Academic tutor	Ass. tutor Tomasz Gacek, PhD
Aim of the course	Building complex 3D models in Rhinoceros, with multiple elements, based on technical documentation and with special emphasis on artistic creativity. Ability to prepare photorealistic visualizations of the object.
Prerequisites	Advanced knowledge of Rhinoceros 3D editing software, its functions and tools. Knowledge of basic rules of making technical drawings and using measuring tools. Semester begins with a test of student's skills.
Learning outcomes:	
- knowledge	Student gains more advanced knowledge about using Rhinoceros for 3D modelling. Learns the advanced methods of making technical drawings. Gains knowledge of ways of editing initial material in a form that is suitable for a given prototyping technology. Can use V-Ray plugin for Rhino for making photorealistic visualizations.
- skills	Students gains the skills that allow for easily utilizing Rhinoceros for 3D modelling purposes, and for creative use of it for design purposes. Can independently build complex, multi-element 3D models at advanced level,

effectively choosing their toolset. Can prepare advanced technical documentation of a project and make a raw material according to specific form of prototype production.

- personal and social competence

Course content

Analysis of a complex, multi-element object in order to creatively use a 3D modelling toolset for making a project. Creating advanced technical documentation of a project. Analysis of a 3D model and preparing raw material in a form suitable for a given prototyping technology. Use of V-Ray for Rhino plugin and texture mapping coordinates, editing materials, lightning of a virtual photographic scene using HDRI maps, creating photorealistic visualizations.

Course form and number of course hours

Classes in a computer workshop, lectures, exercises, consultations, reviews, individual „master-apprentice” classes, 2 hours per week.

Assessment methods and criteria

50% presence at classes / activity during classes / executing assignments
50% practical exam

Assessment type

Graded pass

Literature

Rhinoceros NURBS modeling for Windows – user manual
Tadeusz Dobrzański Rysunek techniczny maszynowy
Chia Fu Chiang and Damien Alomar V-Ray for Rhino – user manual

Teaching aids

Computer workshop, computers with necessary software, 3D Connection manipulators, projector, measuring tools, digital photo camera.

Language of instruction

Polish