

CAD TECHNIQUES 02 – CAD BIM

Institute/Division: A43 - Institute of Construction Design; Division of Descriptive Geometry, Technical Drawing and Engineering Graphics

Number of contact hours: 30

Course duration: 1 or 2 semesters (Fall and/or Spring Semester)

ECTS credits: 4

Course description: Application of Computer Aided Design methods and techniques into practice. Includes BIM (Building Information Modeling) technology for creating 3D objects with AutoCAD Architecture, Revit and ArchiCAD applications. Introduction of modern tools (Drawing Board, 3D printer) and methods (BIM, BEM – Building Energy Model, Graphisoft Virtual Building Solution for Teamwork, “working in the cloud”) into design process: starting from a 3D modeling, through visualization (3dsMax Design, Artlantis), animation (ArchiCAD, 3dsMax Design, Artlantis) and Virtual Reality (BIMX) into technical layouts, cross sections and dimensioning creation (Technical Documentation). Working with Graphisoft EcoDesigner - a new technology for Sustainable Design - enables quick and efficient evaluation of alternative solutions based on energy consumption, carbon footprint and monthly energy balance and thereby optimize the design process. Advanced level of the course is offered in the second semester.

Literature: Basic literature on Graphics, CAD, Geometry and Technical Drawing

Course type: Computer laboratory: individual design work

Assessment method: Evaluation of all design assignments

Prerequisites: Basic knowledge on the architectural design, basic ICT skills

Primary target group: All level students in Architecture , Landscape Architecture , Civil Engineering

Lecturer: Marek Cyunel, MSc Arch.

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