Course Unit Descriptor

Study Programme: Architecture

Course Unit Title: Advanced BIM technology

Course Unit Code: AD0016

Name of Lecturer(s): Lazić Marko

Type and Level of Studies: Master

Course Status (compulsory/elective): elective

Semester (winter/ summer): summer

Language of instruction: english

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated: 5

Prerequisites: none

Course Aims:.

Training students to create and enhance architectural projects using advanced BIM tools and associated tool sets.

Learning Outcomes:
The outcome of the course is to master the process of improving and optimizing architectural projects using advanced BIM technology.

Syllabus.
Strategic application of BIM technology as a means to improve the process of architectural design. History and the theory of applying BIM technology in architecture. The principles of analyzing projects made using BIM technology. Qualitative and quantitative analysis as the basis for the analysis of the cost price, construction time and energy consumption of the built object and monitoring building life cycle. Modeling architectural objects in several dimensions (nD modeling) with the application of interoperability in the BIM environment. Collaborative work in BIM software and coordination between team members. Principles of BIM management. BIM technology applied for the purpose of energy efficiency. Rule based design applied in BIM projects. Application of software tools: Autodesk Revit, Graphisoft Archicad, Grasshopper with associated tool-sets, Solibri Model Checker, CostIks.

Required Reading:
Relevant literature in English, tbd

Weekly Contact Hours: 2	**Lectures: 2**	**Practical work: 0**

Teaching Methods:
Lectures and exercises in a computer laboratory. Consultations. During the exercise, the student is obliged to do practically oriented tasks. Part of the material is passed through one colloquium. The colloquium is done in a computer laboratory and implies the practical application of knowledge acquired during lectures and exercises during the first half of the semester. A student may take the exam only if he has won at least 30% of the colloquium points. Examination takes place in a computer lab. Assessment is formed on the basis of attending lectures and exercises and success at colloquium and exam.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Attendance			
Computer exercises			
Tests (4x)			