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| Course: | Digital Fabrication | | | | |
| Course code: | AD0003 | | | | |
| ECTS credits: | 8 | | | | |
| Lecturers: | Stavrić Milena | | | | |
| Number of classes(per week) | | | | | |
| Lectures: 3 | Practice: 0 | Other forms of classes: 2 | Academic research: 0 | Other: 1 | |
| Prerequisite courses: | | | | | |
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| 1. Educational objectives: | | | | | |
| <i>Enabling the students to make physical models of complex forms generated from digital 3D models by using various digital techniques.</i> | | | | | |
| 2. Educational outcomes (acquired knowledge): | | | | | |
| <i>To apply acquired knowledge in the further educational process and professional work.</i> | | | | | |
| 3. Course content/structure: | | | | | |
| <i>Introduction and definition of the concept of production and digital fabrication in architecture. History and theory of application of 3D models in order to generate architectural models and architectural structures. Geometric principles and strategies of 3D modeling in relation to the different tasks of creating physical models. Techniques for 2D and 3D CAM fabrication. The logic of the 3D model production for CNC (Computer Numerical Control) digital fabrication process. The logic for creating 3D models (Rapid Prototyping) for digital fabrication process. Examples of making physical models generated from 3D digital models in relation to the use of different digital fabrication techniques. The properties of materials used for digitally generated physical models.</i> | | | | | |
| 4. Teaching methods: | | | | | |
| <i>Lectures and exercises in the laboratory for modeling and digital fabrication. Consultation. Teaching consists of 3 segments: the theoretical part, demonstration and development of two digitally fabricated models. In the theoretical part the various techniques of digital fabrication and the role of geometry and materials in its construction are described. 2 tasks are performed on exercises. On the first task students work independently, and the second task was designed for work in a team with up to 5 members. Topic can be associated with other subjects such as parametric modeling or generative design in which digitally generated form is defined. 2nd task may be related to the interactive systems, where digitally fabricated model makes structural system capable of changing forms as a response to environmental influences. The course has no formal final exam and is considered to be successfully completed if the student through independent and team work successfully completes planned tasks.</i> | | | | | |
| Knowledge evaluation (maximum number of points 100) | | | | | |
| Pre-exam assignments | Compulsory | Points | Final examination | Compulsory | Points |
| Complex exercise | YES | 70 | Theoretical part of the exam | YES | 30 |
| Lecture attendance | YES | 0 | | | |
| Computer exercise attendance | YES | 0 | | | |
| Literature | | | | | |
| Relevant literature in English | | | | | |