

**Digital Architecture 1.**

Course Code: EPE030AN-LA-01, EPE030AN-LA-02  
Semester: Autumn 2018/2019 1.

**Course Syllabus**

Time: P Tuesday 7:45-9:15; 11:15-12:45  
L Even week Tuesday 9:30-11:00  
Location: PTE MIK, L A-109, P A109

**General Information:****Name of Course:**

# DIGITAL ARCHITECTURE I.

**Course Code:**

EPE030AN-LA-01, EPE030AN-LA-02

**Semester:**3<sup>rd</sup>**Number of Credits:**

3

**Allotment of Hours per Week:**

1 lectures, 2 practices

**Evaluation:**

Mid semester grade

**Prerequisites:**

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**Instructors:****Márk Zagorác**

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**Introduction, Learning Outcomes**

Introduction of the contemporary planning software and BIM (Building Information Modeling) workflows. During the semester the students will get information about the different type of usage of the software and about the documentation possibilities with the help of a 3D model. They will study about the BIM processes and more usage of the models for example in the construction phase or in case of audit.

**General Course Description and Main Content:**

Brief Syllabus: This lecture and practical based course aims to give the basic knowledge about Building Information Modeling and to show the possibilities of the planning software. There will be comparisons between the traditional and new (based on BIM) methods. A lot of example will be presented to give the expected knowledge to the students. During the semester the students have to choose between 2 software (Graphisoft Archicad or Autodesk REVIT) which they would like to use.

**Methodology:**

On the lectures the students get information about the theoretical knowledge of Building Information Modeling and they can use this information at the practices during the modelling processes.

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**Schedule:**

Study period in 15 weeks: February 4 - December 11 (2018)

1. Introduction, explaining of the syllabus of the semester
2. Lecture: Usage of BIM, Introduction of the software, studying of the 2D tools
3. Producing of a short test exercise, Basic graphical elements introductions
4. Lecture: The most commonly used BIM terminologies, Practice: Using the 3D tools
5. Studying the special setting of the 3D elements, other 3D tools introduction
6. Lecture: BIM in the measuring process, Practice: test exercise producing
7. Studying the special setting of the 3D elements, other 3D tools introduction
8. Lecture: IFC fileformat, Practice: Studying the special setting of the 3D elements, other 3D tools introduction
9. **Autumn holiday**
10. Lecture: Differences between the traditional and BIM based methodologies, Practice: documentation and graphical settings
11. Documentation and graphical settings
12. Lecture: Presentation of BIM roles , Practice: documentation and graphical settings
13. Documentation and graphical settings
14. Consultation about questions, individual exercise producing
15. **Lecture: Test, Practice: Test**
16. **Retake of the tests**

**Attendance:**

Attending is required all classes, and will impact the grade (max. 10%). Unexcused absences will adversely affect the grade, and in case of absence from more than 30% of the total number of lesson will be grounds for failing the class. To be in class at the beginning time and stay until the scheduled end of the lesson is required, tardiness of more than 20 minutes will be counted as an absence. In the case of an illness or family emergency, the student must present a valid excuse, such as a doctor's note.

**Evaluation + Grading**

Grading will follow the course structure with the following weight:

1. Class participation, class activity 10 %
2. Activity on the occasions 5 %.
3. Test of the lecture: 40 %
4. Test of the practice: 40%

**Grading scale**

Numeric Grade:	5	4	3	2	1
Evaluation in points:	89%-100%	77%-88%	66%-76%	51%-65%	0-51%

**Students with special needs:**

Students with special physical needs and requiring special assistance must first register with the Dean of the Students Office. All reasonable requests to provide an equal learning environment for all students is to be assured.

**Required Reading and other Materials will be equivalent to:**

David Kent Ballast, FAIA, CSI - ARCHITECT'S HANDBOOK of Construction Detailing  
 Chuck Eastman, Paul Teicholz, Rafael Sacks, Kathleen Liston – BIM Handbook  
 Stever Pittard and Peter Sell - BIM and Quantity Surveying (Routledge, 2016 / ISBN: 9780415870436)  
 Gianluca Casagrande, András Sik, Gergely Szabó – Small Flying Drones