Digital Architecture 1.
 Course code: EPE30ANEM

Semester: Autumn 2019/2020 1.

Course Syllabus
Schedule: P Tuesday 7:45-9:15; 11:15-12:45
L Tuesday 9:30-11:00
Location: PTE MIK, P-A109, L-A316

General Information:

Name of Course:	# DIGITAL ARCHITECTURE I.

Course Code:	EPE030ANEM
Semester:	3rd
Number of Credits:	3
Allotment of Hours per Week:	1 Lectures and 2 Practical Lessons /Week
Evaluation:	Signature (with grade)
Prerequisites:	-

Responsible lecturer:	**Balazs KOSA., associate professor**
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Instructors:	**Mark ZAGORACZ dr., associate professor**
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General Subject Description
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.

Learning Outcomes

The course will focus on:

- Examine and exploring of meaning and rules of BIM.
- Developing the knowledge of modern technologies in architectural field.
- Study about CAD software usage, tools and new way of thinking.
- Developing the theoretical and practical knowledge about digital technology usage like modeling, surveying, audit, management.

Subject 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 Atodesk REVIT) which they would like to use.

Examination and evaluation system
*In all cases. Annex 5 of the St atutes of the University of Pécs, the **Code of Studies and Examinations (CSE) of the University of Pécs** shall prevail. https://english.mik.pte.hu/codes-and-regulations*

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 (it is max. 3 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.

Grading will follow the course structure with the following weight: Mid semester test of practical part 60%, theoretical part report 35%. The remaining 5% will be assessed according to participation, progress, effort and attitude. Please note that attendance will adversely affect one's grade, both in direct grade reduction and in missing work in the development of a project.

The final grade will be based on the following guidelines:

(Grade 5) Outstanding work. Execution of work is thoroughly complete and demonstrates a superior level of achievement overall with a clear attention to detail in the production of drawings, models and other forms of representation. The student is able to synthesize the course material with new concepts and ideas in a thoughtful manner, and is able to communicate and articulate those ideas in an exemplary fashion in.
(Grade 4) High quality work. Student work demonstrates a high level of craft, consistency, and thoroughness throughout drawing and modelling work. The student demonstrates a level of thoughtfulness in addressing concepts and ideas, and participates in group discussions. Work may demonstrate excellence but less consistently than an '5' student.
(Grade 3) Satisfactory work. Student work addresses all of the project and assignment objectives with few minor or major problems. Graphics and models are complete and satisfactory, exhibiting minor problems in craft and detail.
(Grade 2) Less than satisfactory work. Graphic and modelling work is substandard, incomplete in significant ways, and lacks craft and attention to detail.
(Grade 1) Unsatisfactory work. Work exhibits several major and minor problems with basic conceptual premise, lacking both intention and resolution. Physical representation in drawing and models is severely lacking, and is weak in clarity, craft and completeness.

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Grading Scale:

Numeric Grade:	5	4	3	2	1
	A, excellent	B, good	C, avarage	D, satisfactory	F, Fail
Evaluation in points:	88%-100%	77%-87%	66%-76%	55%-65%	0-54%

Readings and Reference Materials

Required:

- o David Kent Ballast, FAIA, CSI - ARCHITECT'S HANDBOOK of Construction Detailing
- o Chuck Eastman, Paul Teicholz, Rafael Sacks, Kathleen Liston – BIM Handbook

More:

- o Stever Pittard and Peter Sell - BIM and Quantity Surveying (Routledge, 2016 / ISBN: 9780415870436)
- o Gianluca Casagrande, András Sik, Gergely Szabó – Small Flying Drones

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.

Students with Special Needs

Students with a disability and needs to request special accommodations, please, notify the Deans Office. Proper documentation of disability will be required. All attempts to provide an equal learning environment for all will be made.

Detailed requirements and schedule of the Course

Schedule

Study period in 15 weeks: September 4 - December 15 (2018)
Lecture topics:

Usage of BIM, Introduction of the software, the most commonly used BIM terminologies, BIM in the surveying process, IFC fileformat, differences between the traditional and BIM based methodologies, presentation of BIM roles. The report of the theoretical part will be on the 13th week.

Practices:

1st week: Introduction, explaining of the syllabus of the semester
2nd week: Studying of the 2D tools
3rd week: Producing of a short test exercise, basic graphical elements introductions
4th week: Using the 3D tools
5th week: Studying the special setting of the 3D elements, other 3D tools introduction
6th week: Test exercise producing
7th week: Studying the special setting of the 3D elements, other 3D tools introduction
8th week: Studying the special setting of the 3D elements, other 3D tools introduction
9th week: Autumn holiday
10th week: Views
11th week: Documentation and graphical settings
12th week: Documentation and graphical settings
13rd week: Documentation and graphical settings
14th week: Mid-semester test
15th week: Retake of the tests

Balazs KOSA
responsible lecturer

Pécs, 29.08.2019