# General informations:

**Curriculum:** Architectural engineer (07 semester) Master’s degree program,

 Architectural Art Master’s degree program,

 Architectural engineer master’s degree program

 Interior designer master’s degree program

**Course name: Digital presentation**

**Course code:** EPM032AN-EA-00

**Semester:** 1

**Credit number:** 3

**Weekly lessons number:** 2/0/0

**Evaluation:** mid semester grade (f)

**Prerequisite(s): -**

Course responsible: Dr. Donát Rétfalvi, associate professor

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Tutor: Olivér Rák, assistant professor

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## Course description

## During the semester, the students will get knowledge about online accessible open data sources and how to manage them with geographical information system tools. We will give special attention to remote sensing and BIM (Building Information Modeling). From the modern architectural presentation methods, the AR – VR technology and 3D printing will be presented. During the lectures emphasis is placed on knowledge of construction law, building authority procedures, furthermore applications that are connected to these topics and used during construction.

## Aim of the course

During lectures tools, computer applications and methods will be shown, that can help during designing process in an efficient and modern way. The course’s content will follow a real project’s runoff and investigates the problems with methods that are required to solve them. These will show in details, how can we access information that are required to start an architectural designing process (e.g.: site data, topography, demographic data, legislation, etc.). Describes modern procedures that can be used during a designing process, gives insight to RS (Remote Sensing), GIS (Geographical Information System) and BIM (Building Information Modeling). Presents methodologies that are connected to building and utilizing a BIM model, furthermore modern presentation methods and provides a comprehensive picture of the construction regulatory environment besides the computer applications used construction.

## Course content

During lectures tools, computer applications and methods will be shown, that can help during designing process in an efficient and modern way. The course’s content will follow a real project’s runoff and investigates the problems with methods that are required to solve them. These will show in details, how can we access information that are required to start an architectural designing process (e.g.: site data, topography, demographic data, legislation, etc.). Describes modern procedures that can be used during a designing process, gives insight to RS (Remote Sensing), GIS (Geographical Information System) and BIM (Building Information Modeling). Presents methodologies that are connected to building and utilizing a BIM model, furthermore modern presentation methods and provides a comprehensive picture of the construction regulatory environment besides the computer applications used construction.

## Evaluation and grading scheme

For taking the course, the system of requirements and fulfillment, the student mandatory actions during the diligent-, exam- and final exam periods, in all cases the normative is the University of Pécs’s oranizational and operational rules, number 5. appendix in force, the University of Pécs’s **Study and Examination regulations.**

To pass the course, the student have to be active on the lessons besides, they has to pass the test at the end of the semester. The tests grade has to be at least 50%.

The course ends with a grade without an exam. The semester closing will be on the 15th week.

**Maximum obtainable points** **100p**

85 p – 100 p 100% A (5, jeles,excellent,sehr gut)

70 p – 84 p 84% B (4, jó, good, gut)

55 p – 69 p 69% C (3, közepes, avarage, befriedigend)

40 p – 55 p 55% D (2, elégséges, satisfactory, genügend)

0 p – 39 p 39% F (1, elégtelen, fail, ungenügend)

To get the signature, the students has to pass the test at the end of the semester, with at least 50%

## Required and recommended literature

course’s note and presentations

[1.] BIM Guidelines

[2.] EU BIM Handbook

## Teaching method

We will transfer the knowledge via presentations and analizations of cases of studies.

Method:

While information technology is developing in the most dynamic way, teaching has to focus on preparing the student to understand the dynamic processes, not on teaching static knowledge. The aim is to teach the students how to use manual and digital technics together to solve a problem, not just teach them how to use a software.

# The course’s detailed schedule and requirements

## Weekly schedule

|  |  |
| --- | --- |
| **1.Week** | Thursday 7:45-9:15 |
|  | Lecture |
|  | theoretical lecture |
| September 8. | Introduction, present the semester’s thematics |

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| **2.Week** | Thursday 7:45-9:15 |
|  | Lecture |
|  | theoretical lecture |
| September 15. | Remote sensing theoretical background  |

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| **3.Week** | Thursday 7:45-9:15 |
|  | Lecture |
|  | theoretical lecture |
| September 22. | Remote sensing in practise I. |

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| **4.Week** | Thursday 7:45-9:15 |
|  | Lecture |
|  | theoretical lecture |
| September 29. | Remote sensing in practise II. |

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| **5.Week** | Thursday 7:45-9:15 |
|  | Lecture |
|  | theoretical lecture |
| October 6. | Remote sensing in practise III. |

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| **6.Week** | Thursday 7:45-9:15 |
|  | Lecture |
|  | theoretical lecture |
| October 13. | Remote sensing case studies |

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| **7.Week** | Thursday 7:45-9:15 |
|  | Lecture |
|  | theoretical lecture |
| October 20. | 3D center visit / 3D printing |

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| **8.Week** | Thursday 7:45-9:15 |
| October 27. | Lecture |
|  | Lecture |
|  | Point cloud usage in authoring tools |

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| **9.Week** | Thursday 7:45-9:15 |
| November 3. | FALL BREAK |

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| **10.Week** | Thursday 7:45-9:15 |
|  | Lecture |
|  | Lecture |
| November 10. | Presentation about BIM |

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| **11.Week** | Thursday 7:45-9:15 |
|  | Lecture |
|  | Lecture |
| November 17. | VR / AR introduction |

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| **12.Week** | Thursday 7:45-9:15 |
|  | Lecture |
|  | Lecture |
| November 24. | VR lab visit |

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| **13.Week** | Thursday 7:45-9:15 |
|  | Lecture |
|  | Lecture |
| December 1. | VR lab visit |

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| **14.Week** | Thursday 7:45-9:15 |
|  |  |
| Methodology | test |
| December 8. | Theoretical test |

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| **15.Week** | Thursday 7:45-9:15 |
|  |  |
|  | test |
| December 15. | (supplement, rewrite) |

We reserve the right to make changes in the detailes (date/place/clarification) of this program, we will notify the students about the changes in all cases. With issues or questions that arise duing the semester, the students can turn to the course responsible or the tutor or the institute coordinator.

 dr. Rétfalvi Donát

 course responsible

Pécs, 23.08.2022.