# General Information:

Name of Course:

Advanced Construction Management

Course Code: MSM055ANEM

Semester: 7th/1st

Number of Credits: 2

Allotment of Hours per Week: 1 Lectures and 1 Practical Lessons /Week

Evaluation: Examination grade

Prerequisites: Construction Management 3.

Responsible lecturer: Balázs FÜREDI dr., assistant professor

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Instructors:

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## General Subject Description

The subject of Advanced Construction Management provides theoretical and practical training in the Architect BSc degree program. During the lectures and practical sessions of the semester, students will gain competitive knowledge in the field of construction implementation and construction management. Costing and budgeting, workplace scheduling, organizational deployment make up the tasks of the semester for students.

## Learning Outcomes

The course will focus on:

* Developing engineering thinking
* PM in general
* Learning how to prepare a budget
* Getting to know the basics of workplace organization planning (Site plan)

## Subject content

During the lectures students will learn about the basic of the project managing, the phases of the construction projects, time scheduling of a project and the cost estimating of them. Besides the lectures, they are going to attend construction site visits where they can learn the practical solution of the managing methods.

During the practical sessions, students will have to make a live site organization plan on a realistic site in the town. They have to find the most effective and efficient solution for the situations.

The Course includes:

* Regular (weekly) supervisions by teacher of the Department of Engineering Studies.
* Continuous consultation and correction of the practical task in the classes
* Preparation for the mid-term paper
* Organizational analysis at the site plan, its presentation and analysis of alternative solutions
* Presentation of organizational plan assignment in class
* Preparing for the Midsemester tests

## Examination and evaluation system

*In all cases.* *Annex 5 of the Statutes 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 15% of the total number of lesson (it is max. 30%) 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.

The highest possible grade on the late project (after Study Period before Exam Period) is ‘2’.

*End-of-semester grade may be given by exam grade which may be defined on the basis of the performance at the exam exclusively or by taken into consideration performance on mid-term tests and the exam jointly. In the latter case the exam shall contribute to the grade by 40% at least and the mid-term tests by 40% at most.*

*Article 50. (2)497 In the case of a student failing to fulfil an obligation which is a condition of entry to exam pursuant to the requirements and may be made up for in the exam period, the student shall be entitled to attempt*

*to satisfy the requirement of the given course on one occasion not later than the end of the second week*

*of the exam period. If the student does not attend this one occasion the lecturer is not obliged to provide*

*the student with a further appointment for making up for the completion.*

Details of the points in the mid-term:

Task of the practice: 1th task – 50 point, min. 25 point

Site plan: max. 50 point, min. 25 point.

Points of exam:

85 p – 100 p 85%-100% (5, excellent)  
70 p – 85 p 70%-85% (4, good)  
55 p – 70 p 55%-70% (3, avarage)  
40 p – 55 p 40%-55% (2, satisfactory)  
0 p – 40 p 0%-40% (1, fail)

*Grading of the course*:

The exam shall contribute to the grade by 40% at least and the mid-term tests by 40% at most.

170 p – 200 p 85%-100% (5, excellent)  
140 p – 170 p 70%-85% (4, good)  
110 p – 140 p 55%-70% (3, avarage)  
80 p – 110 p 40%-55% (2, satisfactory)  
0 p – 80 p 0%-40% (1, fail)

Grading will follow the course structure with the following weight: Site plan, 40%, Midsemester tests 50%. The remaining 10% 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 projects.

The final grade will be based on the following guidelines:

**(Grade 5)** **Outstanding work.** All semester assignments and the mid-term paper are completed and performed at a high level. The tasks are well thought out and are organised logically. The student actively participates in the consultations and arrives to classes well-prepared. He or she carries out the tasks to be submitted and performs at the mid-term paper in exemplary quality.

**(Grade 4)** **High quality work.** All semester assignments and the mid-term paper are completed and performed at a high level. The tasks are well thought out and are organised logically. The student actively participates in the consultations and arrives to classes well-prepared. 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. Site plan is complete and satisfactory, exhibiting minor problems in detail.

**(Grade 2)** **Less than satisfactory work.** The tasks are suitable in terms of content; the level of their elaboration is acceptable, but not outstanding. No failures at any partial tasks or tests are allowed.

**(Grade 1)** **Unsatisfactory work.** Work exhibits several major and minor problems with basic conceptual premise, lacking both intention and resolution. Physical representation in drawing is severely lacking, and is weak in clarity and completeness.

Grading Scale:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Numeric Grade: | 5 | 4 | 3 | 2 | 1 |
|  | A, excellent | B, good | C, avarage | D, satisfactory | F, Fail |
| Evaluation in points: | 85-100 | 70-85 | 55-70 | 40-55 | 0-40 |

## Readings and Reference Materials

**Required:**

* + R. Chudley, R. Greeno - Building construction handbook seventh edition (2008)

ISBN: 978-0-7506-86228

**More:**

* + Sidney Levy - Construction process planning and Management (2010)

ISBN : 978-1-85617-548-7

* + Emad Elbeltagi - Lecture notes on construction project management (2009)
  + S.W. Nunnally – Construction Methods and Management (2007)

ISBN 0-13-171685-9

* + Frank R. Dagostino, Steven J. Peterson - Estimating in Building Construction (2011)

ISBN-13: 978-0-13-119952-1

* + Københavns Erhvervsakademi and VIA University College, Horsens(E-BOOK) (2011)

## Methodology

During the training, we provide students with up-to-date information. The tasks are based on real cases and examples. Student works are carried out with constant control, but at the same time the personal aptitude of each student must be revealed.

## 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

|  |  |  |  |
| --- | --- | --- | --- |
| Week | Lecture/Practice | Subject of lecture | Subject of Practice |
| 1. | Introduction | Introduction. Basic information on  the semester. A phases of the  project. | Introduction. |
| 2. | Participants | The participants of the construction project. | Visual tools of PM. Mind map. |
| 3. | Phases of construction  project 1. | Preparation and planning. Starting  of construction projects,  preparation and planning.  Selecting architect (competition). | Organizations and their operation. The architect’s office. |
| 4. | Phases of construction  project 2. | Selecting contractor. Construction  and operation. | Planning competitions. |
| 5. | Basics of Project  Management. | PM in general. | Functional analyses. |
| 6. | PM in construction industry | PM in details. | PM problem solving.  **Midsemester test 1** |
| 7. | Scheduling, basics | Basics and theory of time  planning. | Communication. Conflict  treatment. |
| 8. | Scheduling, methods | The methods of scheduling.  Network time planning. | Scheduling in practice 1. |
| 9. | Autumn break |  |  |
| 10. | Constitutive week | - |  |
| 11. | Scheduling, Computer  aided scheduling | Samples. Using computer for time  planning. Softwares. | Scheduling in practice 2. |
| 12. | Site planning. | Site planning. | Cost estimation. Cost and time.  **Midsemester test 2.** |
| 13. | Cost estimation 1 | Budget, cost estimation. | Site planning in detail. |
| 14. | Cost estimation 2. | Cost calculation methods. | Calculation in practice. |

## Task description

*Each student has to work on an individually selected assignment. The simulations are based on a real construction site, a real building. As part of the implementation, all students will acquire the knowledge required to solve the task at the actual construction sites.*

The project selected depends on the construction process and site. During the classes students will acquire the information regarding the structural system of the buildings to be built, the building materials and the applied construction technology.

You should:

* follow the task assigned for you
* actively participate in consultations
* acquire user-level ArchiCAD skills
* have basic-level expertise in building structure and technology

We reserve the right to make changes to the details of this course syllabus (date / location / clarifications), which will be communicated to the students. In case of questions and problems that arise during the semester contact the responsible lecturer or the study program coordinator.

Balázs FÜREDI dr.

responsible lecturer

Pécs, 1st September, 2022.