

General Information:

Name of Course:

Construction management 2.

Course Code:

MSB058AN

Semester:

5th

Number of Credits:

4

Allotment of Hours per Week:

2 Lectures and 2 Practical Lessons /Week

Evaluation:

Examination grade

Prerequisites:

Construction management 1.

Responsible lecturer:

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General Subject Description

The subject of Construction Management 2 provides theoretical and practical training in the Civil Engineer 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, organizational deployment make up the tasks of the semester for students.

Learning Outcomes

The course will focus on:

- Developing engineering thinking
- Creation and development of a digital building models
- 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 construction processes, the finishing works of the construction trade, and the order of construction of monolithic and prefabricated building structures. Besides the lectures, they are going to attend construction site visits where they can learn the practical knacks of the trade.

During the practical sessions, students will have to prepare the 3-dimensional model of the building they have chosen, collect the required quantities of material and then prepare a budget calculation for the building according to the technological sequence concerned.

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
- Submission budget analysis in digital format following consultations

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 50% at least and the mid-term tests by 50% 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
Mid-semester test: max. 50 point, min. 25 point.

Points of exam:

85 p – 100 p	85%-100% (5, excellent)
70 p – 88 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 50% at least and the mid-term tests by 50% at most.

170 p – 200 p	85%-100% (5, excellent)
141 p – 169 p	70%-85% (4, good)
119 p – 140 p	55%-70% (3, avarage)
99 p – 118 p	40%-55% (2, satisfactory)
0 p – 98 p	0%-40% (1, fail)

Grading will follow the course structure with the following weight: Site plan+midsemester test, 40%, Project 3D modell, cost estimation 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. Graphics and models are 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 and models 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	Theme of the lectures and practices
1.	L: Introduction of the term, the syllabus of the semester P: Datasheet and introduction of the term
2.	L: The construction process P: Task of semester Cost estimating of building construction 1th
3.	L: Technical preparation and controlling of the construction. Contracting process. P: Cost estimating of building construction 2th
4.	L: The state and the environment of the construction site P: Consultation
5.	L: Conditions of the start up and the finishing of the construction work. Handover process. Quality controlling in the construction. Health and safety requirements. P: Consultation
6.	L: Site planning of the construction. P: Consultation
7.	L: Site planning of the construction. P: Consultation
8.	L: SITE VISIT P: Consultation
9.	AUTUMN BREAK
10.	L: Basics of Project Management P: Consultation
11.	L: Project phases I. P: 1th Deadline of the task
12.	L: Test - Construction equipment. Material supply. P: 2th Deadline of the task
13.	L: PM in construction industry P: Workspace and time scheduling 1th
14.	L: Small site plan Cost estimation/Time P: Workspace and time scheduling 2th
15.	L: L: Scheduling, computer aided scheduling P: End-of-semester signature
16.	last one occasion to satisfy the requirement of the rejected end-of-semester signature
16-20. week	16-20. week Exam Period: Exams

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. In practice sessions, the aim is to develop a cost estimating and building's workplace scheduling.

Theme description

The construction process

Phases and participants of the construction process (roles, responsibilities, connections, etc.).

The state and the environment of the construction site

Soil-mechanics, geodesics. Reviewing natural- and geographic characteristics of the site, accessing roads, water- and power supply, etc.

*Technical preparation and controlling of the construction. Contracting process./
Site planning of the construction*

Detail design: Documentation for tendering (tender set of drawings), documentation for construction (working drawings) Tendering - choosing from several possible contractors/ Site organisation. General layout of the construction site, arranging temporary structures, e. g. roads, stores, etc.

Conditions of the start up and the finishing of the construction work. Handover process.

Quality controlling in the construction. Health and safety requirements.

Erecting the building according to the completed plans. Supervision of construction. Running-in (testing the systems of the building). Handover – take over of the building

Construction equipment. Material supply.

Main equipment of construction (earthwork, foundation work, construction of loadbearing structures, etc.)
Material supply on site - to the site.

Types of foundations/special foundations

Types of foundations - construction technologies, conditions, requirements.

Basics of construction technology. The right order of the construction works./ Time scheduling.

Technologies in the construction process – aspects of selecting the technologies. Sequence of construction works (the follow-up of processes)./ Types, relations. List of operations, survey for quantities, labour schedule, plant schedule, material schedule.

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, 31.08.2022