

## COURSE SYLLABUS AND COURSE REQUIREMENTS

### ACADEMIC YEAR 2022/2023 SEMESTER 2ND

<i>Course title</i>	<i>Architectural technology &amp; construction management 2.</i>
<i>Course Code</i>	MSE061AN
<i>Hours/Week: le/pr/lab</i>	1/1/0
<i>Credits</i>	3
<i>Degree Programme</i>	Architecture Bsc, Architecture OTM
<i>Study Mode</i>	full time course
<i>Requirements</i>	examination grade
<i>Teaching Period</i>	4th
<i>Prerequisites</i>	Architectural technology & construction management 1. MSE060AN
<i>Department(s)</i>	Department of Engineering Studies
<i>Course Director</i>	Balázs Füredi dr.
<i>Teaching Staff</i>	Balázs Füredi dr. Szabolcs Patyi Balázs Novák

## COURSE DESCRIPTION

Neptun: Instruction/Subjects/Subject Details/Basic data/Subject description

The subject of Architectural Technology and Construction Management 2 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. Building modelling, quantity calculation, costing and budgeting, workplace scheduling, organizational deployment make up the tasks of the semester for students.

## SYLLABUS

Neptun: Instruction/Subjects/Subject Details/Syllabus

### 1. GOALS AND OBJECTIVES

Neptun: Instruction/Subjects/Subject Details/Syllabus/Goal of Instruction

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)

### 2. COURSE CONTENT

Neptun: Instruction/Subjects/Subject Details/Syllabus/Subject content

#### TOPICS

<b>LECTURE</b>	<ol style="list-style-type: none"><li>1. topic: construction of monolithic reinforced concrete structures</li><li>2. topic: construction of prefabricated reinforced concrete structures</li><li>3. topic: masonry, bricklaying</li><li>4. topic: facades</li><li>5. topic: dry construction systems</li><li>6. topic: wall and floor tiling</li><li>7. topic: construction of steel structures</li><li>8. topic: placing of the cranes</li></ol>
<b>LABORATORY PRACTICE</b>	<ol style="list-style-type: none"><li>1. topic: building modelling and measurements calculation</li><li>2. topic: cost estimating of building construction</li></ol>

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.

*Important note: Taking into account the meteorological conditions and the currently valid legal regulations and the possible pandemic situation in Hungary, as well as the mandatory university closures, the practical site visits may be modified.*

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 of the 3D model, the quantity calculation, and budget analysis in digital format following consultations

The requirements are issued according to the course syllabus, which are uploaded to the Neptun and MS Teams interfaces of the course, as well as to the "witch" server of the Faculty, together with the lecture materials and help documents. Information related to the subject will also be available on these interfaces.

## DETAILED SYLLABUS AND COURSE SCHEDULE

### LECTURE

week	Topic	Compulsory reading; page number (from ... to ...)	Required tasks (assignments, tests, etc.)	Completion date, due date
1.	Introduction, construction of monolithic reinforced concrete structures	lecture notes	-	2023.02.08.
2.	-	-	-	
3.	Construction of prefabricated reinforced concrete structures	lecture notes	preparation from the previous lecture	2023.02.22.
4.	-	-	-	
5.	Masonry, bricklaying, facades	lecture notes	preparation from the previous lecture	2023.03.08.
6.	-	-	-	
7.	Dry construction systems, wall-and floor tiling	lecture notes	preparation from the previous lecture	2023.03.22.
8.	-	-	-	
9.	SPRING BREAK	lecture notes	preparation from the previous lecture	2023.04.05.
10.	-	-	-	
11.	Construction of steel structures	lecture notes	preparation from the previous lecture	2023.04.19.
12.	-	-	-	
13.	Placing of the cranes I.	lecture notes	Midsemester test different time of the lecture	2023.05.03.
14.	-	-	-	
15.	Placing of the cranes II.	lecture notes	Replied midsemester test different time of the lecture	2023.05.17.

**PRACTICE, LABORATORY PRACTICE**

<i>week</i>	<b>Topic</b>	<b>Compulsory reading; page number (from ... to ...)</b>	<b>Required tasks (assignments, tests, etc.)</b>	<b>Completion date, due date</b>
1.	P: Datasheet and introduction of the term 1. task – Building modelling and measurements calculation	practice notes, help documents	-	2023.02.09.
2.	P: Datasheet and introduction of the term 1. task – Building modelling and measurements calculation	practice notes, help documents	preparation from the previous practice	2023.02.15. and 2023.02.16.
3.	Consultation	practice notes, help documents	preparation from the previous practice	2023.02.23.
4.	Consultation	practice notes, help documents	preparation from the previous practice	2023.03.01. and 2023.03.02.
5.	Consultation	practice notes, help documents	preparation from the previous practice	2023.03.09.
6.	Consultation	practice notes, help documents	preparation from the previous practice	2023.03.15. (National Holiday) and 2023.03.16.
7.	Deadline of the 1. task 2. task - Cost estimating of building construction	practice notes, help documents	preparation from the previous practice	2023.03.23.
8.	Deadline of the 1. task 2. task - Cost estimating of building construction	practice notes, help documents	preparation from the previous practice	2023.03.29. and 2023.03.30.
9.	SPRING HOLIDAY	-	-	2023.04.06.
10.	Consultation	practice notes, help documents	preparation from the previous practice	2023.04.12. and 2023.04.13. (Pollack Expo)
11.	Consultation	practice notes, help documents	preparation from the previous practice	2023.04.20.
12.	Consultation	practice notes, help documents	preparation from the previous practice	2023.04.26. and 2023.04.27.
13.	Consultation	practice notes, help documents	preparation from the previous practice	2023.05.04.
14.	Deadline of the 2. task	practice notes, help documents	preparation from the previous practice	2023.05.10. and 2023.05.11.
15.	Deadline of the 2. task	practice notes, help documents	preparation from the previous practice	2023.05.18

**3. ASSESSMENT AND EVALUATION**

(Neptun: Instruction/Subjects/Subject Details/Syllabus/Examination and Evaluation System)

**ATTENDANCE**

In accordance with the Code of Studies and Examinations of the University of Pécs, Article 45 (2) and Annex 9. (Article 3) a student may be refused a grade or qualification in the given full-time course if the number of class absences exceeds 30% of the contact hours stipulated in the course description.

**Method for monitoring attendance**

Method for monitoring attendance: attendance sheet, which led to lectures and practices, every time

## ASSESSMENT

### Course-unit with final examination

#### Mid-term assessments, performance evaluation and their weighting as a pre-requisite for taking the final exam

Type	Assessment	Weighting as a proportion of the pre-requisite for taking the exam
1. Building modelling	max 20 points	50%
2. Measurements calculation	max 10 points	
3. Cost estimation	max 20 points	
4. Test	max 28 points	
5. Attendance at lectures and laboratory practices	max 14 points	
6. Visiting optional construction site tours	max 8 points	
7. Exam	max 100 points	50 %

#### Requirements for the end-of-semester signature

The conditions for successful completion of the semester are active class attendance, attendance at construction site visits in appropriate protective equipment, and successful completion of the mid-semester test and the exam.

Certified attendance at practical sessions is done in accordance with the regulations laid down in the topic! The practice leaders keep an attendance sheet/consultation sheet, with published and not attended/didn't prepare for class. The maximum number of absences allowed during practical classes is 30% according to the 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>), 2 occasion.

During the semester, students report on their work and knowledge several times.

Attendance at lectures and laboratory practices are worth a total of 14 points during the semester in a distribution of 7 points each.

During the semester, we organize on-site visits and construction visits, with an educational purpose. Their time and group assignments are determined individually and announced during the first education week. During the semester, the student can confirm his participation in two optional tours of the construction site at a time determined in advance by the instructors by signing the attendance led by the Organizer. Therefore, 4-4 points are awarded, which are included in the semester score

#### Re-takes for the end-of-semester signature

The semester closes at the end of the 15th week. Mid-semester tests that do not reach the minimum score can be corrected once during the due diligence period.

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, average)
40 p – 55 p	40-55% (2, satisfactory)
0 p – 40 p	-40% (1, fail)

Type of examination (written, oral): **oral**

The exam is successful if the result is minimum **40** %.

#### Calculation of the grade

The mid-term performance accounts for **50** %, the performance at the exam accounts for **50** % in the calculation of the final grade.

**Calculation of the final grade based on aggregate performance in percentage.**

Course grade	Performance in %
excellent (5)	85 % ...
good (4)	70 % ... 85 %
satisfactory (3)	55 % ... 70 %
pass (2)	40 % ... 55 %
fail (1)	below 40 %

The lower limit given at each grade belongs to that grade.

#### **4. SPECIFIED LITERATURE**

*(In Neptun ES: Instruction/Subject/Subject details/Syllabus/Literature)*

##### **COMPULSORY READING AND AVAILABILITY**

[1.] R. Chudley, R. Greeno - Building construction handbook seventh edition (2008), ISBN: 978-0-7506-86228

##### **RECOMMENDED LITERATURE AND AVAILABILITY**

[1.] Sidney Levy - Construction process planning and Management (2010), ISBN : 978-1-85617-548-7

[2.] Emad Elbeltagi - Lecture notes on construction project management (2009)

[3.] S.W. Nunnally – Construction Methods and Management (2007), ISBN 0-13-171685-9

[4.] Frank R. Dagostino, Steven J. Peterson - Estimating in Building Construction (2011), ISBN-13: 978-0-13-119952-1

[5] Københavns Erhvervsakademi and VIA University College, Horsens(E-BOOK) (2011)