

*General Information:*

**Name of Course:**

# BUILDING CONSTRUCTIONS 2

**Course Code:**

EPE110AN

**Semester:**

2th

**Number of Credits:**

6

**Allotment of Hours per Week:**

2 Lectures and 4 Practical Lessons /Week

**Evaluation:**

Signature and exam

**Prerequisites:**

**Completed Building Constructions 1.**

**Responsible lecturer:**

**Miklós HALADA dr., associate professor**

Office: 7624 Hungary, Pécs, Boszorkány st. 2. B-327

E-mail: halada@mik.pte.hu

phone: +36 72 503650/23840

**Instructors:**

**Miklós HALADA dr., associate professor**

Office: 7624 Hungary, Pécs, Boszorkány st. 2. B-327

E-mail: halada@mik.pte.hu

phone: +36 72 503650/23840

**Tibor Zoltán Dányi dr., assistant lecturer**

Office: 7624 Hungary, Pécs, Boszorkány st. 2. B-322

E-mail: danyitiborzoltan@mik.pte.hu

phone: +36 72 503650/23818

### General Subject Description

This subject intends to teach the following topics: requirements of building constructions; history of wall structures; walls built from solid bricks and stone, general rules of brick bounds; modern masonry materials, ceramic blocks, partition walls; lintels and openings of load-bearing wall structures; brick and stone arches, reinforced concrete joists; requirements and planning aspects of stairs, interior stairs, structural solutions for curved stairs, interior stairs made of reinforced concrete, metal and wood, stair structures of residential and public buildings, structural design of monolithic reinforced concrete stairs, stair structures made of stone and cast stone, pre-fabricated stair structures. In addition students will be introduced to the regulations and requirements structural design of ring beams, curved ceiling structures, the historical development, types and structural design of vaults. Chimneys and vents.

### Learning Outcomes

This course provides a sound basis for students to improve their construction and structural design skills, through both the theory based lectures and through the practical element of the course, where students are introduced to the construction process of a residential building. This subject includes architectural design projects in the practical part where students can practice and further develop the content of the lectures

The course will focus on:

- Individual design processing, and developing upon relevant methodologies and design techniques
- Individual design processing, and developing upon relevant methodologies and design techniques
- Carrying out within a specified time

### Subject content

The Building Constructions 2 course includes:

- Regular (weekly) supervisions by an appointed Main Supervisor.
- Drawing Tasks (selected number A/2 pages) prepared with architectural drawings and documentation
  1. Drawings of the 2 storey detached house (floor plans, sections, elevations 1:100)
  2. Brick Bound drawing
  3. Foundation plan 1:50 (plans of foundation, sections 1:50, 3.details 1:5)
  4. Lintels
  5. Staircase construction drawing plan (plans of 2 floors, sections 1:25, 3.details 1:5)
- ~~Mid semester drawing tests~~
  - ~~1. Brick bound design~~
  - ~~2. Staircase calculation~~
- Written 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. 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. 4 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.

At the time of the practice lessons (LAB), all drawing assignments must be presented in the class. In case of online attendance the scanned or photographed drawings must be uploaded until the beginning of the practice lesson to Microsoft Office 365 Teams (in the best possible quality) in JPG. or PDF. format. If uploading is blocked, please send it to the email address of the instructor.

**A drawing task can be accepted and evaluated if at least 50% of all parts of the drawing task have been completed.**

The accepted drawings which are submitted according the deadline will be evaluated with extra points. Those who do not present the task at the deadline could present the drawing by the evaluation of the next drawing task, in this case the extra point is missed. Missed assignments can be resubmitted once in the first week of the examination period, at a time announced by the supervisor. In case of resubmissions in the examination period, the final point will be reduced with the score of the extra points.

**Grading will follow the course structure with the following weight:**

<b>0. Brick bonds:</b>	<b>signature</b>	
<b>1. Detached house:</b>	<b>15 point</b>	<b>3 extra point</b>
<b>2. Foundation Plan:</b>	<b>10 point</b>	<b>2 extra point</b>
<b>3. Arch and lintels</b>	<b>10 point</b>	<b>2 extra point</b>
<b>4. Staircase</b>	<b>10 point</b>	<b>2 extra point</b>
<b>5. Curved staircase plan</b>	<b>5 point</b>	<b>1 extra point</b>

**1.st. mid semester drawing test: brick bonds** **5 point**

**2. mid semester drawing test: staircase design** **5 point**

**Written test:** **40 point**

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.

Grading Scale:

Numeric Grade:	5	4	3	2	1
	A, excellent	B, good	C, average	D, satisfactory	F, Fail
Evaluation in points:	85%-100%	71%-84%	60%-70%	50%-59%	0-49%

## Readings and Reference Materials

**Required:**

- R. Barry: [THE CONSTRUCTION OF BUILDINGS Volume 1-7](#)
- Francis D.k. Ching\_ [Building Construction Illustrated](#)

**More:**

- Julius Panero, Martin Zelnick (1979) [Human Dimension and Interior Space: A Source Book of Design Reference Standards](#) ISBN 0823072711. Watson-Guptill
- E. Neufert, P. Neufert (2002). [Neufert Architects' Data](#)
- Julia McMorrough (2014). [Drawing for Architects: How to Explore Concepts, Define Elements, and Create Effective Built Design through Illustration](#)

## Methodology

The course is based on individual architectural skills with regular consultations and presentations.

## 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**

The semester is divided into two principle periods and attendant exercises.

The rough outline of the schedule is as follows:

	Lecture	Lab
1.	Conventional wall structures, brick bounds	<b>First drawing and second tasks:</b> 2 storey detached house drawing 1:100, Brick Bound drawing. <b>Board practice: brick joints</b>
2.	Shallow foundations	Consultation.
3.	Wall structures, stone and clay block walls	Consultation <b>Third drawing task:</b> Foundation plan <b>Presentation of Brick Bound drawing</b>
4.	Concrete block walls, aerated concrete walls	Consultation <del>Mid-semester drawing test: Brick Bounds</del>
5.	Arched lintels	<b>Fourth drawing task: Lintels and arches</b> Consultation
6.	Openings and lintels	Consultation <b>Presentation of Foundation Plan,</b> <b>Resubmission of Brick Bound drawing</b>
7.	Wall structures	Consultation
8.	Staircase calculation	Consultation <b>Presentation of Lintels drawing</b> <b>Resubmission of Foundation Plan</b>
9.	R.F. Concrete Staircase	<b>Board practice: staircase</b> <b>Fourth drawing task: Staircase</b> Consultation
10.	<b>holiday week</b>	<b>holiday week</b>
11.	Staircase elements	Consultation
12.	Timber, steel, glass staircases Acoustic solutions	<del>Mid-semester drawing test: Staircase</del> <b>Presentation of Staircase drawing</b> <b>Fifth drawing task: Curved Staircase</b>
13.	Chimneys and vents	Consultation
14.	Deep Foundations	<b>Presentation of Curved Staircase</b> <b>Resubmission of Staircase drawing</b>
15.	<b>Written test</b>	<b>Resubmission of Curved Staircase</b> <b>Presentation of detached house Drawing</b>

**Studio Culture:**

The course is based on through collaboration, participation and discussions through lessons. This is an interaction between Students and Faculty; used the teaching methods like 'Problem-based learning' and 'learning-by-doing'. The communication and work should be reflect a respect for fellow students and their desire to work with regard to noise levels, noxious fumes, etc – from each site of participants.

**Attendance:**

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 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.

**Please join the lectures and labs personally or online via Microsoft Office 365 Teams system.** During the online learning period the attendance will be fixed automatically by Microsoft Office 365 Teams. **Please be active online!**

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.

Miklós HALADA dr.  
responsible lecturer

Pécs, 22.01.2021