

Architect

Building Construction 6.
Course code: EPE317AN
A206
Semester: Spring 2019/2020 2.

Course Syllabus

Schedule: Lecture Wednesday, periods 9.30am-10.15am Location: PTE MIK,

Lab Thursday, periods 13.15pm-16.30pm Location: PTE MIK, A313

*General Information:***Name of Course:****Course Code:****Semester:****Number of Credits:****Allotment of Hours per Week:****Evaluation:****Prerequisites:****Responsible lecturer:****Instructors:**

BUILDING CONSTRUCTIONS 6

EPE317AN

6th

7

2 Lectures and 4 Practical Lessons /Week

Signature and exam

Completed Building Constructions 5.**Miklós HALADA dr., associate professor**

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General Subject Description

This subject intends to teach the following topics: requirements of building constructions; industrial halls wide-span structures; methods of spatial construction, design principles of the load bearing elements, walls, pre-fabricated wall structures, partition walls; windows and openings. Beside the basic knowledge, the target of the course is to learn the advanced engineering thinking. A substantial goal is to provide students with ample tools and an understanding of appropriate technologies in the field of widespan structures.

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 widespan structures. 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
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- Carrying out within a specified time

Subject content

The Building Constructions 6 course includes:

- o reinforced concrete frame halls
- o steel frame halls
- o laminated timber structures
- o space frames
- o cable structures
- o shell structures
- Regular (weekly) supervisions by an appointed Main Supervisor.
- Drawing Tasks (selected number A/3 pages) prepared with architectural drawings and documentation
 1. Drawings of the reinforced concrete hall (floor plan, sections 1:50)
 2. Drawings of the steel frame hall (floor plan, section 1:50)
 3. Drawings of the laminated timber hall (floor plan, section 1:50)
 4. Drawings of the space frame (floor plans, sections, elevations 1:50)
 5. Semester task, execution plan (floor plans, sections 1:50, 3.details 1:10)
- Case study presentation and booklet
- Written test

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. 2 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.

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

Grading will follow the course structure with the following weight: Drawing tasks Presentation 40%, Case study and presentation 20%. The remaining 40% will be assessed according the final written test. Please note that attendance will adversely affect one's grade, both in direct grade reduction and in missing work in the development of a project.

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:

- Heino Engel (2007) Tragsysteme Structure System
- Francis D. K. Ching: Building Structures Illustrated, Fifth Edition. Wiley, Hoboken, New Jersey, USA, 2014

More:

- E. Neufert, P. Neufert (2002). Neufert Architects' Data
- <https://www.kingspan.com/>
- <http://www.lindab.com/>

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.	Description of the semester study program Introduction	Description of the semester study program
2.	Structures of reinforced concrete framed halls	First drawing task: reinforced concrete hall Board practice
3.	Foundations, flooring and walls	Consultation Presentation of first drawing
4.	Details of R.F. concrete halls	Consultation Selection of case study topic
5.	Structures of steel framed halls	Second drawing task: steel frame hall Board practice
6.	Details of steel frame halls	Consultation Presentation of second drawing
7.	Structural systems	Consultation
8.	Timber frame structures	Third drawing task: timber frame hall Board practice
9.	Details of timber frame halls	Consultation Presentation of third drawing
10.	Space frames	Fourth drawing task: space frame Board practice
11.	holiday week	holiday week
12.	Cable structures	Presentation of case study Consultation
13.	Shell Structures	Consultation
14.	Written test	Final Consultation
15.	Retake of written test	Presentation of the semester task

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.

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.

Pécs, 01.02.2020

Miklós HALADA dr.
responsible lecturer