

COURSE SYLLABUS AND COURSE REQUIREMENTS

ACADEMIC YEAR 2022-2023 SEMESTER I.

<i>Course title</i>	<i>Building Construction 3.</i>
<i>Course Code</i>	EPB101ANEP
<i>Hours/Week: le/pr/lab</i>	3/0/0
<i>Credits</i>	3
<i>Degree Programme</i>	Civil Engineering
<i>Study Mode</i>	full-time training
<i>Requirements</i>	exam
<i>Teaching Period</i>	Wednesday, 15:00-17:30, Every week
<i>Prerequisites</i>	Completed Building Constructions 2
<i>Department(s)</i>	Department of Building Structures and Energy Design
<i>Course Director</i>	dr. Miklós Halada
<i>Teaching Staff</i>	dr. Péter Paári
<i>Hours/Week: le/pr/lab</i>	3/3/0

COURSE DESCRIPTION

The primary intention of this subject is to teach students the following theoretical topics: drawing representation of slab, roof structures, wooden roof structures and joinery, Chevron roof structures, vacant and collar beam roof structures, purlin roof structures, roof structures with one, two and multiple support members, roof structure with slanted support members, purlin roofs with struts, mansard roof structures, hipped roof structures, carpenter joints, suspended roof structures.

SYLLABUS

1. GOALS AND OBJECTIVES

Slab structures. Roofing, imbricate roof structures, tough roofing systems, tile roofing, concrete roof tiles, slate roofs, wooden and thatched roofs, boarded roofs, flashing and guttering, breakthroughs in roofing, metal plates, chimneys and gravitational ventilation. The topics listed above serve as a basic theoretical knowledge for students and are complimented by practical sessions where students work through the design of a residential building. This subject includes an architectural design project in the practical part (marked with a P) where students can practice and further develop the content of the lectures (marked with an L).

The course will focus on:

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

2. COURSE CONTENT

The Building Constructions 3 course includes:

Regular (weekly) supervisions by an appointed Main Supervisor.

Drawing Tasks (selected number A/2 pages) prepared with architectural working drawings documentation (plans, sections, elevations 1:50) and with a sufficient number of detail drawings (1:10, 1:5)

- Roof shape drawing 1:200
- Slab plan 1:50
- Complex roof plan

Methodology:

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

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 reflect a respect for fellow students and their desire to work with regard to noise levels, noxious fumes, etc – from each site of participants.

TOPICS

LECTURE

1. Determining of roof shapes
2. Conventional slab structures
3. Slab structures, precast slabs

4. Conventional roof structures, Strut less and strutted purlin roofs, couple and collar roofs. Conventional timberwork details Mansard roofs, Half pitched roofs, Low sloped roof.
 5. Hipped roof design rules
 6. Complex roof structures, rules of arrangement, King-post roof structures
 7. Engineering roof structures and timberwork
 8. Roof covers, Ceramic roof tiles
 9. Metal sheet roofing, details
 10. Slate roof covers
 11. Thatched roof of rye straw, Wooden Roof Shingles, bitumen roof covers
 12. Roof gutter and drainage system
 13. Roof cover breakthroughs. Additional roof cover elements
 14. Loft structures
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1. design practice: Roof Shape
 2. drawing task: Slab plan
 3. drawing task: Complex roof structure

PRACTICE

DETAILED SYLLABUS AND COURSE SCHEDULE

ACADEMIC HOLIDAYS INCLUDED

LECTURE

week	Topic	Compulsory reading; page number (from ... to ...)	Required tasks (assignments, tests, etc.)	Completion date, due date
1.	Determining of roof shapes			
2.	Conventional slab structures			
3.	Slab structures, precast slabs			
4.	Conventional roof structures, Strut less and strutted purlin roofs, couple and collar roofs. Conventional timberwork details Mansard roofs, Half pitched roofs, Low sloped roof.			
5.	Hipped roof design rules			
6.	Complex roof structures, rules of arrangement King-post roof structures			
7.	Engineering roof structures and timberwork			
8.	Roof covers, Ceramic roof tiles			
9.	Holiday			
10.	Metal sheet roofing, details			
11.	Slate roof covers			
12.	Thatched roof of rye straw, Wooden Roof Shingles, bitumen roof covers			
13.	Roof gutter and drainage system			
14.	Roof cover breakthroughs. Additional roof cover elements			
15.	Loft structures			

PRACTICE, LABORATORY PRACTICE

week	Topic	Compulsory reading; page number (from ... to ...)	Required tasks (assignments, tests, etc.)	Completion date, due date
1.	1 st . drawing task: Roof shape drawing 1:200 Consultation Design practice: Roof Shape			week 4
2.	Consultation			
3.	2 nd . drawing task: Slab plan			
4.	1 st . drawing presentation			

5.	Consultation			
6.	Consultation 3 rd drawing task: Complex roof structure 1 st . Drawing final presentation			
7.	Consultation			
8.	Consultation 2 nd . drawing task presentation			
9.	Holiday			
10.	Consultation 2 nd . drawing task final presentation			
11.	Consultation			
12.	Consultation 3 rd drawing task presentation			
13.	Consultation			
14.	Final Consultation 3 rd drawing task final presentation			
15.	last retake of the drawing tasks			

3. ASSESSMENT AND EVALUATION

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.

The highest possible grade on the late project (in two weeks) is '2'. The Final Project cannot be turned in late.

Method for monitoring attendance

attendance sheet

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. 1 st . Drawing Task (Second deadline for max. 8 p.: 6 th week)	10p (8+2 extra p.)	10 %
2. 2 nd . Drawing Task (Second deadline for max. 16 p.: 11 th week)	20p (16+4 extra p.)	20 %
3. 3 rd . Drawing Task (Second deadline for max. 16 p.: 15 th week)	20p (16+4 extra p.)	20 %

The remaining 50 point will be assessed according Exam. 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.

Requirements for the end-of-semester signature

accepted drawing tasks with a minimum point (40% of the point, 1st task: 4p, 2nd task: 8p, 3rd task: 8p)

Re-takes for the end-of-semester signature (PTE TVSz 50\$(2))

The specific regulations for grade betterment and re-take must be read and applied according to the general Code of Studies and Examinations. All the drawing tasks to be submitted can be repeated/improved each at least once every semester, and the tests and home assignments can be repeated/improved at least once in the first two weeks of the examination period.

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Type of examination: written

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

Calculation of the grade (TVS_z 47§ (3))

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 order of relevance. (In Neptun ES: Instruction/Subject/Subject details/Syllabus/Literature)

COMPULSORY READING AND AVAILABILITY

[1.] Eberhard Schunk (2003) Roof Construction Manual, <http://www.amazon.com/Roof-Construction-Manual-English-Edition/dp/3764369868>