BUILDING CONSTRUCTION III. 2022/23. 1. SEMESTER

BASIC DATA				
COURSE NAME	**Épületszerkezetek III.**		**Building Construction III.**	
COURSE CODE(S)	YARÉSZ3BNF			
DEPARTMENT	Óbuda University Ybl Miklós Faculty of Architecture, Institute of Architecture			
PROGRAMME, TRAINING	Architect Bsc		full time, Erasmus	
COURSE INSTRUCTOR (Instructor managing the course)	Dr. Gergely Norbert VIZI PhD, Assistant Professor	vizi.gergely@ybl.uni-obuda.hu	consulting hours: by prior arrangement	
INSTRUCTORS, LECTURERS				
PRE-REQUIREMENT	2 semesters Building Constructions			
HOURS OF LECTURES (WEEKLY)	2 hours (2x 45')		**HOURS OF CLASSROOM PRACTICE/ LAB EXERCISE (WEEKLY)**	2 hours (2x45')
ASSIGNMENT	Midterm assignment, tests and exam		**CREDITS**	7 credits (ECTS)
BRIEF DESCRIPTION	• To get to a common knowledge on basic building structures and systems in Central Europe such as foundation-, wall-, slab, roof- structure, roof- and wall cladding structures. • To learn the requirements and applicability of this structures and • To get familiar with the required form and content of an execution plan with the help of the end term plan			
RECOMMENDED LITERATURE - **(Building Construction)**	dr. Gábor László (2006): Épületszerkezettan I-IV. UNIVERSITAS, Budapest Széll László (2011): Magasépítéstan I-II. TERC Kft., Budapest Bajza József (2015): Épület és szerkezete. TERC Kft., Budapest Fátrai György (2008): Történeti tetőszerkezetek. TERC Kft., Budapest Bársony István (2006): Magasépítéstan I. TERC Kft., Budapest Bársony István (2007): Magasépítéstan II. TERC Kft., Budapest Christian Schittich (ed.) (2008): Building Skins. BIRKHÄUSER EDITION DETAIL, Berlin Ansgar and Benedikt Schulz (2016): Perfect Scale. BIRKHÄUSER EDITION DETAIL, Berlin Christian Schittich (Ed.) (2006): Maisons individuelles. BIRKHÄUSER EDITION DETAIL, Berlin Christian Schittich (Ed.) (2010): Small Structures. BIRKHÄUSER EDITION DETAIL, Berlin Detail magazin https://www.detail-online.com/			
TECHNICAL EQUIPMENT REQUIRED	Rulers, pencils, A3-A2 paper. The use of mobile phone is prohibited during the examinations. In the case of online education: Contact: Neptun, E-learning and E-mail. Education materials: According to E-learning Lessons: E-learning, Zoom Own laptop is suggested			

SCHEDULE OF THE SEMESTER

WEEK	LECTURE	LECTURER	FORM OF PRACTICE	PROGRAM OF PRACTICE
1	Introduction, Getting to know each other DICTIONARY, DESIGNING LAYER ORDER. Building physics, heat, moisture	VGN	Handing out HW#1	Designing layer order for wall, slab, floor, footing Handing out **Project work #1** (execution plan)
2	FOUNDATIONS, FOOTING, WALLS, LINTEL BEAMS. • Design questions, External envelope impacts and requirements	VGN	*HF1 consultation*	Presenting 1:100 floor plans, designing the slab, layer sequences, and calculating heat insulation
3	**BUILDING TECHNOLOGY 2** LIGHT WEIGHTED CONSTRUCTION, WOOD AND STEEL FRAME	VGN	MGY1	**Teamwork: frame distribution plan**
4	ROOF STUCTURES	VGN	**1st. TEST** MGY2: roof structure *HF1 consultation: floorplan, section*	Roof structures 1:50 sketch #2 1:50
5	ROOF CLADDINGS	VGN	MGY3 *HF1 consultation: floorplan, section* ***roof stucture***	MGY3: Different roof cladding tiles HF1 Roof structure and section(with brick layout)
6	TINSMITH WORK	VGN	MGY4 *HF1 consultation: elevation, details*	MGY4: Detailing the eaves and selvedge
7	**BUILDING TECHNOLOGY 2** CHARACTERISTICS AND SPECIFICATIONS OF ROOF CONSTRUCTING	VGN	*HF1 consultation: elevation, details*	Presenting HW#1 at 90%, getting signature
8	LAYERED WALL SYSTEMS	VGN	**2nd. TEST** (roofs) **Handing in HW#1**	
9	WALL CLADDING KITS I. • DESIGN QUESTIONS, SUBSTRUCTURE SYSTEMS • BOARD AND METALLIC CLADDINGS	VGN	MGY5: claddings HF1 expletive submission Handing out HF2:	HF2: Substructure layout and cladding plan 1:20 (1:25) section, part of floorplan, part of elevation, 2 pcs 1:10 (1:5) details
10	**BUILDING TECHNOLOGY 3** LAYERED WALLS, SCAFFOLDING	VGN	Handing out HF3:	HF3: building technology description
11	RECTORAL BREAK			
12	WALL CLADDING KITS II. • STONE AND BRICK CLADDINGS	VG	**3nd. TEST**	
13	**BUILDING TECHNOLOGY 4** CHARACTERISTICS AND SPECIFICATIONS OF WALL CLADDINGS	VGN	CorZH1, CorZH2 **Handing in HF2 and HF3**	
14	Review, conclusion.	VG	**Pót ZH3** HF2 and HF3 expletive submission	Evaulation

REQUIREMENTS FOR THE COMPLETION OF THE SEMESTER		
MID-SEMESTER TASKS AND TESTS		
REQUIREMENT	**DESCRIPTION**	**Value** *(point, %, grade)*
PARTICIPATION AT LESSONS	The practice lessons can be missed up to three times (see § 46 ETVSZ) You have to arrive well prepared, otherwise you won't be marked as present in the lectures and seminars	-
IN CASE OF ABSENCE FROM LESSONS AND EXAMINATIONS	Absence is considered to be justified with a medical certificate presented.	-
MGY1 FRAME DISTRIBUTION PLAN	Groupwork where frame distribution plan is made for construction. *Formal requirements*: on provided pre-printed worksheet with pen, fineliner, pencil, ruler. *Handing in:* at the end of class	
MGY2 ROOF STRUCTURES	The students prepare the drawing of a roof structure and make a model from self-brought materials. M=1:50 *Formal requirements*: you must work on the worksheet downloaded and printed from e-learning. Work with pencil. Free hand drawing is advised *Handing in:* at the end of class	max:5 min:3
MGY3 ROOF CLADDING TILES	Students make models for different cladding and draw them in section and view. *Formal requirements*: you must work on the worksheet downloaded and printed from e-learning. Work with pencil. Free hand drawing is advised *Handing in*: at the end of class	
MGY4 TINSMITH WORK	The students draw two eaves, and edges with proper tinsmith work. *Formal requirements*: you must work on the worksheet downloaded and printed from e-learning. Work with pencil. Free hand drawing is advised *Handing in:* at the end of class	
MGY5 WALL CLADDINGS	A cladding and substructure drawing is created, where students will practice the rules of claddings' substructure design. *Formal requirements*: you must work on the worksheet downloaded and printed from e-learning. Work with pencil. Free hand drawing is advised *Handing in:* at the end of class	
HF1 EXECUTION PLAN	The students will make an execution plan of a family house based on their previous knowledge with weekly consultation. *Formal requirements*: drawings on A2/A3-as paper S=1:50, 1:10 scale, drawings must be made by pencil with rulers. *Handing in:* as in schedule. teacher's signature required before handing in 1db floorplan M=1:50, 1 pcs section M=1:50, 1 pcs elevation M=1:50, 5pcs details	max 30 min 15
HF2 WALL CLADDING	As independent work, with weekly consultation the students prepare the wall cladding and substructure design for their building designed at the building design course. S=1:20(/1:25) scale in view, section, floorplan. *Formal requirements*: A3-as page M=1:20(/1:25) scale, with ruler. *Handing in:* 1 or 2 pcs. A3 page according to schedule. teacher's signature required before handing in	max 15 min 8
HF3 BUILDING TECHNOLOGY DESCRIPTION	Detailed technological description for the heat insulation/wall cladding work of the prepared building *Formal requirements*: 5 pages of continuous text with proper English. Copying manufacturer's webpage or description is not allowed! *Handing in:* upload to e-learning in PDF format.	max 15 min 8
OPTIONAL TASK (NOT OBLIGATORY, AND DOES NOT REPLACE ANY TASK OR PARTICIPATION IN ANY DUTY!)	Presentation connecting to the semester/ business trip report/ workbook presenting in the last lecture	max 6 points
TEST	The goal of the TESTs is to check the general knowledge acquired from the subject. In the test we will basically require drawings worthy of an engineer with explanatory text. You should acquire 60% in the test to pass it.	TEST1 - min 6, max10 TEST 2 and TEST 3- min 8, max15

TOTAL	100 points

SEMESTER CLOSING REQUIREMENTS					
CONDITIONS FOR OBTAINING A SIGNATURE	You have to do all of the tasks and have at least the minimum points from all of them separately. You have not skipped lectures and/or practice more than 3 times				
SEMESTER GRADE	0-50 points	51-65	66-79	80-89	90-100
	1 - FAIL	2 - PASS	3 - SATISFACTORY	4 - GOOD	5 - EXCELLENT
CONDITIONS FOR OBTAINING AN OFFERED GRADE	You can obtain an offered grade if your tasks are min. 80%, all of the the tests are a minimum 80%, and you have reached min 80 points. You have actively participated in the lectures. The offered grade is given if the lecturer and the course instructor agrees on it. In case of online education, no offered grade can be given.				
	80-89 points			90-100 points	
	4 - GOOD			5 - EXCELLENT	
SIGNATURE RETAKE EXAM	One out of the three tests can be retaken in the signature retake exam, if the test and the corrective test was both unsuccessful. If neither the test and nor the corrective test was written (min 20% of the total points) the test can't be retaken in the signature retake exam. The signature retake exam will be from the whole material of the semester. OR The building design part can be re-submitted if the other homework were submitted during the semester and the points gained for those reaches the minimum requirement. In case of submitting with signature retake, the maximum point will be equal with the minimum point. SO One of the tests OR the building design part can be done with signature retake exam, not both!				
CONDITIONS FOR ADMISSION TO THE EXAM	Only students who have already obtained a signature can take the exam. During the exam period, the student has to register for the exam in the Neptun. The test is a written test with a total value of 100 points.				
EXAM GRADE	0-59 Points	60-69	70-79	80-89	90-100
	1 - FAIL	2 - PASS	3 - SATISFACTORY	4 - GOOD	5 - EXCELLENT
FINAL GRADE	Final grade is made of the semester grade added to the exam grade.				
	0-101 points	102-130	131-159	160-179	180-200
	1 - FAIL	2 - PASS	3 - SATISFACTORY	4 - GOOD	5 - EXCELLENT