RELATED DISCIPLINES OF DESIGN 2025/26. 2. SEMESTER

BASE INFORMATIONS				
COURSE NAME	**Szakági tervezés**		**Related Disciplines of Design**	
COURSE CODE(S)	YAWRDAFMNF			
DEPARTMENT	Óbuda University, Ybl Miklós Faculty of Architecture, Institute of Architecture			
PROGRAMME, TRAINING	Architect MSc		full time	
COURSE INSTRUCTOR (Instructor managing the course)	Dr. Gergely VIZI PhD, Assistant Professor	vizi.gergely.norbert@ybl.uni-obuda.hu	Consultations: as on webpage, by prior e-mail appointment	
INSTRUCTORS, LECTURERS				
	Dániel BADIK-SZABÓ	badik-szabo.daniel@ybl.uni-obuda.hu	as on webpage, by prior e-mail appointment	
	Dr. Norbert BOROSS	boross.norbert@uni-obuda.hu	Preferably on-line, by e-mail appointment	
	Gergely SZAKÁCS	gregszakacs@gmail.com	Consultations: by prior e-mail appointment	
PRE-REQUIREMENT	Complex Design I, Community and Urban Planning		**HOURS OF LECTURES (WEEKLY)**	1 hours
HOURS OF CLASSROOM	(**TRAINING/LABORATORY TRAINING (WEEKLY)**) 2 hours		**FIELD WORK AND TRAINING(WEEKLY)**	0 hours
ASSIGNMENT	Midterm assignment and test		**CREDITS**	3 credits (ECTS)
AIM OF THE COURSE, BRIEF DESCRIPTION	The objective is to get the students acquainted with legal and technical requirements of engineering specialists' contribution to architectural design and to prepare them for the practical side of it. There are lectures, professional visits, presentations and consultations in the program, related to the main fields of engineering services that contribute to architectural design. Students are expected to conduct their own piece of research, too, and to write a report on the information, practical procedures, calculations and professional guidelines gained throughout the session. The *project management modul* of the Related Disciplines of Design Course aims to provide practical knowledge on the management process of designing and constructing buildings. Combined with site visits the students will better understand the roles and motivations of the project participants, learn effective tools and methods used in the delivery of projects. The homework task assignment is related to the delivery aspects of the design task and will be presented at the end of the course.			
RECOMMENDED LITERATURE	• Chudley &Greeno's Building construction Handbook • Francis D. K. Ching Building Construction Illustrated • 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/ • Project Management for Construction, Fundamental Concepts for Owners, Engineers, Architects and Builders by Chris Hendrickson (https://www.cmu.edu/cee/projects/PMbook/index.html) • A guide to the project management body of knowledge (PMBOK guide) / Project Management Institute • The Practical Guide to Project Management, Christine Petersen, PMP & bookboon.com			
REQUIRED TECHNICAL APPLIANCES/ SOFTWARE	The use of mobile phones 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, Microsoft Teams, Zoom			

SCHEDULE OF THE SEMESTER

WEEK	LECTURE	LECTURER	PRACTICE	PROGRAM OF TRAINING
1. 17 Feb	1. Requirements of the course, description of the course schedule and the literature. General concepts of statics, loads and structural elements. Designing using Masonry structures 2. Design and use of Reinforced Concrete structures 3. Design and use of Steel	Dániel BADIK-SZABÓ 15%	Dániel BADIK-SZABÓ	Handing out the midterm assignment #1
2. 24 Feb	4. Design and use of Steel and Timber structures 5. Soil, and foundations	Dániel BADIK-SZABÓ	Dániel BADIK-SZABÓ	
3. 03 Marc	Building construction	Gergely VIZI	Gergely VIZI	
4. 10 Marc	Introduction to electricity supply networks for buildings, operation (basic electrical units, dimensioning, selection of components). Medium-voltage supply and low voltage supply as the most common methods to connect a building to the public network. Types of transformer stations, structural designs (in-building installations) The basic configurations of low-voltage supply, network components within the building, their design (connections, metering, main distribution room etc.) Basics of lightning protection in a building (necessity, typical design, structural elements) Lighting of buildings, emergency lighting. Smart network- smart meter – smart building – smart homes – the new challenge.	Gergely VIZI	Gergely VIZI	
5. 17 Marc	Building construction	Gergely VIZ 46,5%I	Gergely VIZI	Complex consultation
6. 24 Marc EKIK	plumbing systems **water** supply domestic hot water production, **sewerage,** rainwater drainage / rainwater recovery, fire protection systems (sprinkler) heating, gas supply, cooling / overheating, ventilation building automation, heat generators, heaters, heat exchangers Renewable energy sources: Solar Cells, Solar Collectors, Heat pumps, Biomass	Gergely VIZI	Gergely VIZI	Complex consultation
7. 31 Marc	1. Introduction: goal of the lecture, tasks and requirements. The Project Life Cycle, Participants, Roles 2. Project management, The Design and Construction Process	Gergely SZAKÁCS 38,5%	Gergely SZAKÁCS	Complex consultation online test1
07 Apr	Easter break			
8. 14 Apr	3. Labor, Material and Equipment Utilization, Construction Methodologies 4. Virtual site visit 5. Cost Estimation, Construction Pricing	Gergely SZAKÁCS	Gergely SZAKÁCS	Handing out the midterm assignment #2
9. 21 Apr	6. Contracting 7. Construction planning, scheduling	Gergely SZAKÁCS	Gergely SZAKÁCS	
10. 28 Apr	8. Cost control, monitoring, project reporting 9. Quality Control, Safety	Gergely SZAKÁCS	Gergely SZAKÁCS	online test2
11. 05 May	Consultation	Gergely VIZI	Gergely VIZI	Submission: midterm assignment #2
12. 12 May	10. Handover process, Operation and Maintenance	Gergely SZAKÁCS	Gergely SZAKÁCS	Midterm assignment Presentation
13. 19 May	Concluson	Gergely VIZI		delayed submission -10%

REQUIREMENTS FOR THE COMPLETION OF THE SEMESTER

MID-SEMESTER TASKS AND TESTS

Requirement	Description	Value *(point, %, grade)*
PARTICIPATION AT LESSONS	The practice lessons can maximum be missed up to three times (see § 46 ETVSZ)	-
IN CASE OF ABSENCE FROM LESSONS AND EXAMINATIONS	Absence is considered to be justified with a medical certificate presented.	-
Short description of the TASKS	#1 Detailed section drawing with structural appellations of a chosen multistory building (preferably the one on complex design), presenting the studied building structural elements in 1:50 and 3 detail in 1:10. Indicating the main electric system on the floor plan, and part of the plumbing system on a section.	35 points (min 15)
Short description of the TASKS	#2 To research and prepare construction technology, schedule and project management related questions related to the design task.	35 points (min 15)
Tests		2x15 points
TOTAL		100 points

<table>
<tr><th colspan="6">SEMESTER CLOSING REQUIREMENTS</th></tr>
<tr><td>CONDITIONS FOR OBTAINING A SIGNATURE</td><td colspan="5">Get the minimum points from the mid term tasks and tests.

Anyone who plagiarizes - i.e. violates the provisions of Section 4 (2) of the Code of Ethics of Óbuda University - will be refused permission to complete the course by the instructor responsible for the course, and the University may initiate disciplinary proceedings based on Section 90 of the HKR TVSZ.</td></tr>
<tr><td rowspan="2">SEMESTER GRADE</td><td>0-49 Point</td><td>50-69</td><td>70-79</td><td>80-89</td><td>90-100</td></tr>
<tr><td>1 - FAIL</td><td>2 - PASS</td><td>3 - SATISFACTORY</td><td>4 - GOOD</td><td>5 - EXCELLENT</td></tr>
<tr><td>SIGNATURE RETAKE EXAM</td><td colspan="5">You can correct one of the two task in the beginning of the exam period if you failed it, in case you have successfully completed the other task, and you are at least 80% ready with the one that you failed.</td></tr>
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