ENERGY EFFICIENT AND ECOLOGICAL ARCHITECTURE

2025/2026. 2. SEMESTER

BASIC INFORMATION			
COURSE NAME	**Energiahatékony és ökológiai építészet**		**Energy Efficient and Ecological Architecture**
COURSE CODE(S)	YAXEEEFMNF		
DEPARTMENT	Óbuda University, Ybl Miklós Faculty of Architecture, Institute of Architecture		
PROGRAMME, TRAINING	Architect MSc		full time
COURSE INSTRUCTOR (Instructor managing the course)	Dr. Sugár Viktória PhD	sugar.viktoria@ybl.uni-obuda.hu	
INSTRUCTOR, LECTURER	Ian Chaplin	chaplin.ian@ybl.uni-obuda.hu	
PRE-REQUIREMENT	none		
HOURS OF LECTURES (WEEKLY)	2 hours		
HOURS OF CLASSROOM TRAINING/ LABORATORY TRAINING (WEEKLY)	none		
FIELD WORK AND TRAINING (WEEKLY)	none		
ASSIGNMENT	Midterm presentation, Final Presentation, Final document and Exam.		
CREDITS	3 credits (ECTS)		
AIM OF THE COURSE, BRIEF DESCRIPTION	The aim of the course is to introduce students to academic, cultural and practical understandings on how sustainability relates to forms of habitation, society and the architectural practice. This approach provides a broad spectrum of perspectives with which the students can familiarize themselves with the idea of ecology and energy to develop a personal position in the discourse.		
RECOMMENDED LITERATURE AND OTHER RESOURCES	https://www.climatewatchdata.org/ https://sdgs.un.org/goals Living planet report https://www.stockholmresilience.org/ https://www.globalforestwatch.org/ https://www.wri.org/ https://inequalitylab.world/en/ Olgyay, V. and Olgyay, A. (2015) *Design with climate: Bioclimatic approach to architectural regionalism.* Princeton: Princeton University Press. Reinhart, C.F. (2020) *Daylighting handbook. Cambridge*, MA: Building Technology Press. Lengen, J.van (2011) *The barefoot architect: A handbook for green building*. Bolinas,, CA: Shelter Publications. Jacobs, J. (1992) *The death and life of great american cities: Orig. publ. 1961.* New York: Vintage Books. Richarz, C.C. (2013) *Energy efficiency refurbishments: Principles, details, case studies.* Munich: Walter de Gruyter. *Most books are part of the library collection		
REQUIRED TECHNICAL APPLIANCES/ SOFTWARE / PLAGERISM NOTICE	Students are free to use any suitable software and media, if it fulfils the requirements and aims of the course. AI can be used, unless more institution wide protocols are in place, which in that case should be adhered to. If a product is (even partly) produced by AI, it is required to note it clearly in or directly next to the work itself and provide a short explanation to the way it has been used somewhere within the framework of the wider presentation.		

SCHEDULE OF THE SEMESTER

WEEK	LECTURE	FORM OF TRAINING
1. *16 February*	Ecology & Economy	Lecture+challenge
2. *23 February*	Light & Openings	Lecture+challenge
3. *02 March*	Infrastructure & Sustainable Cities	Lecture+challenge
4. *09 March*	Heat & Body	Lecture+challenge
5. *16 March*	Performance & Standards	Lecture+challenge
6. *23 March*	-	**Midterm Presentations**
7. *30 March*	Animals, Plants and Soils	Lecture+challenge
8. *13 April*	Timber	Lecture+challenge
9. *20 April*	Occupancy	Lecture+challenge
10. *27 April*	Circular Design	Lecture+challenge
11. *04 May* ***Before 9 AM***	**Final Document submission deadline (digital submission: chaplin.ian@ybl.uni-obuda.hu)**	
11. *04 May*	-	**Final Presentations**
12. *11 May*	Healthy, Affordable, Self-Made, Low-Tech	Lecture
13. *18 May* *Before 9 AM*	*Delayed submission deadline (digital submission: chaplin.ian@ybl.uni-obuda.hu)*	
13. *18 May*	Policy	Inequality Workshop

REQUIREMENTS FOR THE COMPLETION OF THE SEMESTER		
MID-SEMESTER TASKS AND TESTS		
Requirement	**Description**	**Value** *(point, %, grade)*
PARTICIPATION AT LESSONS	The effects of and exact regulations regarding absence are governed by university standards. It is expected and an obligation of students to be aware of these standards. Most relevant in this regard are § 46 and § 48 of the ETVSZ Attendance will be checked at the start of the class, being late will count as being absent up to the discrepancy of the lecturer. During the lessons the use of a laptop is prohibited, unless mentioned otherwise. It is up to the discrepancy of the lecturer to determine a penalty for not complying to this rule.	-
IN CASE OF ABSENCE FROM LESSONS AND EXAMINATIONS	Please note that the individual lectures will not be shared online, this means that in case of absence it is advised to ask somebody to make notes for you in your stead. Although the lectures provide support, the weekly challenges are manageable without them. As such they remain obligatory for the final document. The challenges will be shared separately in order to support this possibility.	-
WEEKLY CHALLENGES **FINAL DOCUMENT SUBMISSION** **+** **PROBLEMS ON EARTH PRESENTATION** **+** **BUILDING FOR ANIMALS**	In most weeks we have a weekly challenge. These challenges need to be done in the same couples of two, alone or in the case of an uneven number of students with one group of 3. Generally, there is a relatively large portion of every class available to work on these challenges. Two of these challenges will need to be further developed into a presentation. In the case of a missing presentation there will be a timeslot during the last week to try to present again. At the final submission deadline all the weekly challenges have to be fulfilled and compiled into one A3 landscape digital document. It is recommended to finish each challenge the week that it is given, but to compile it at the end as well as to think of the format of the document. At the end of the course, it is required that at least all the challenges are included in the document and the two presentations performed. When both are good enough you will receive an offered grade and be exempted from the exam requirement. **<u>0. ECOLOGY PRESENTATION</u>** Description: - A 5 min A3 pdf-based presentation per fixed group of two, which showcases a personal position on how to approach one of the problems that the earth has at the moment through a build environment discipline related intervention. When relevant it is appreciated to speculate on its physical implementation in the studio design assignment. Requirements: - It should introduce the problem - It should include some speculations on what changes would help improve the current condition. - The presentation should refer to some form of larger entity, research or reliable news outlet. - The presentation should be submitted to the lecturer before the presentation itself. - The file should be max 50mb and pdf	100 points

	1. BUILDING FOR ANIMALS PRESENTATION Description: - A 5 min A3 pdf-based presentation per fixed group of two, which showcases a design that directly or indirectly improves the living conditions of an animal chosen by the group within the current design studio assignment. Requirements: - It should introduce the problematic conditions of the animal or the living conditions that affect a specific group of animals. - It should speculate on which changes could improve the living conditions of that or those animal(s) with physical means - The presentation should refer to some form of larger entity, research or reliable news outlet. - The presentation should be submitted to the lecturer before the presentation itself - The file should be max 50mb and pdf **2. FINAL DOCUMENT SUBMISSION** **Description:** - **A single A3 or A4 pdf document per fixed group of two, which showcases the personal products resulting from the weekly challenges.** - **One or more separate pages per challenge** **Requirements:** - **All challenges should be included** - **If any image, text or anything else was not produced by a group member, it is not a direct problem, but its source should be clearly mentioned! (Not doing so can result in an automatic fail for the course!)** - **Uploaded in Moodle** - **Max 50mb** **Comment:** - **in the case of a delayed submission 10 points will be deducted**	
EXAM	A 90-minute written test. Unless exempted based on having been offered and accepting a grade.	30 points
TOTAL		130 points

SEMESTER CLOSING REQUIREMENTS					
CONDITIONS FOR OBTAINING A SIGNATURE	- Digital submission of a complete final document in time - Having successfully completed the 2 presentations. - Participating in class - A minimum of 60 points after deduction.				
SIGNATURE REPLACEMENT REQUIREMENTS	If all other requirements are met, but the total number of points are below a passable level (0-59), it is possible to apply for a signature replacement. This means that all challenges were performed and included and the presentations did take place!				
SEMESTER GRADE	0-59 Point	60-69	70-79	80-89	90-100
	1 - FAIL	2 - PASS	3 - SATISFACTORY	4 - GOOD	5 - EXCELLENT
CONDITIONS FOR OBTAINING AN OFFERED GRADE	At least 70 points				
CONDITIONS FOR ADMISSION TO THE EXAM	During the exam period, the student must register for the exam in the Neptun.				
EXAM GRADE	The final grade will be the sum of the semester grade and the exam				
	0-77 Point	78-90	91-103	104-116	117-130
	1 - FAIL	2 - PASS	3 - SATISFACTORY	4 - GOOD	5 - EXCELLENT