GENERATIVE DESIGN 1.

BASIC DATA		
COURSE NAME	GENERATIVE DESIGN 1.	GENERATIVE DESIGN 1.
COURSE CODE(S)	YAXGED1MNF	
DEPARTMENT	Óbuda University, Ybl Miklós Faculty of Architecture, Institute of Architecture	
PROGRAMME, TRAINING	Architect MSc	full time
COURSE MANAGER	Dr. habil Ferencz Marcel István DLA	ferencz.marcel.istvan@ybl.uni-obuda.hu	in e-mail
INSTRUCTORS, LECTURERS	Botzheim Bálint	botzheim.balint@ybl.uni-obuda.hu	in e-mail
PRE-REQUIREMENT	-	
HOURS OF LECTURES (WEEKLY)	3 hours	
HOURS OF CLASSROOM TRAINING/ LABORATORY TRAINING (WEEKLY)	3 hours	
FIELD WORK AND TRAINING (WEEKLY)	0 hours	
ASSIGNMENT	Midterm assignment	
CREDITS	3 credits (ECTS)	
AIM OF THE COURSE, BRIEF DESCRIPTION	Goal: attain semi-professional level modeling and rendering skills studying 3d architectural visualization methods while developing an own personal artistic style. Studying basic parametric form procreation methods with generators and node-based systems. Developing an intuitive method of 3d based conceptual design.The student will enter in the language and structure of parametric and generative design and understand the way of designing and thinking with software. There will be a serie of short exercises and then stepping into parametric development of complex designs, facades, structures... As well as paradigmatic exercises as 'surfaces subdivision', 'attractors and repellors', 'trigonometry', 'evaluation of functions', 'management of lists and trees', etc. The student will work with every basic tool , and will get the skills to develop any geometry.	
RECOMMENDED LITERATURE	**IMPORTANT NOTES:** **IN THE SEMESTER WE'RE USING CAD, RENDERING AND FREEFORM MODELING SOFTWARES. PLEASE MAKE SURE TO OBTAIN THE LISTED SOFTWARES BELOW. IN CASE OF YOU'RE INVOLVED IN OTHER 3D ARCH. APPLICATIONS LIKE REVIT, 3DSMAX , VRAY THEN IT IS NOT NECESSARY TO CHANGE YOUR CURRENT WORKFLOW** BLENDER: HTTPS://WWW.BLENDER.ORG/ ARCHICAD ACADEMIC LICENSE HTTPS://MYARCHICAD.COM/	
REQUIRED TECHNICAL APPLIANCES/ SOFTWARE	Contact: Neptun, E-learning and E-mail. Education materials: According to E-learning	

SCHEDULE OF THE SEMESTER

WEEK	LECTURE		PROGRAM OF TRAINING
1.	Presentation	NTERFACE	Tasks uploads – short 3D case studies
2.	Presentation	MODELING SPLINES	
3.	Presentation	BUILDING 3D MODELS FROM POLYGONS - POLYGON MODELING(NURBS VS POLY)	
4.	Presentation	USING DEFORMERS TO BEND, TWIST, AND WARP MODELS - PARAMETRIC DEFORMERS	
5.	Presentation	WORKING WITH 3D LIGHTING ; ADDING SURFACE DETAIL WITH MATERIALS AND SHADERS, PROCEDURAL SHADERS ; USING THE PARAMETRIC TOOLS	Written case study and analysis Live presentations
6.	Presentation		
7.	Presentation		
8.	Presentation		
9.	Presentation		
10. .	Presentation	CREATING AN OWN PERSONAL PROJECT, EVALUATION AND EXHIBITION AND PRESENTATIONS	Tasks uploads – 3D case studies
11.	Presentation		
12.	Presentation		
13.	Presentation		

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)	-
IN CASE OF ABSENCE FROM LESSONS AND EXAMINATIONS	Absence is considered to be justified with a medical certificate presented.	-
UPLOADED COURSE PROJECTS	**10x5 points**	50 points
EXHIBITION READY PORTFOLIOS AND ARCHITECTURAL BOARDS	overall visual quality and modeling skills	25 points
PRESENTATION	overall communication skills in terms of parametric and generative designs	25 points
TOTAL		100 points

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YBL MIKLÓS FACULTY OF ARCHITECTURE
AND CIVIL ENGINEERING

SEMESTER CLOSING REQUIREMENTS					
CONDITIONS FOR OBTAINING A SIGNATURE	COURSE RATING ASPECTS: - VISUAL AND ARCHITECTURAL QUALITY OF UPLOADED WORKS - PRESENTATION SKILLS WITH CORRECT TERMINOLOGY - PARTICIPATION IN EMERGING DISCUSSIONS, DIALOGS				
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	-				
CONDITIONS FOR ADMISSION TO THE EXAM	-				
EXAM GRADE	-				