강의계획서 　　　　　　　　　　　　　　　　　　　　　　　　　　　　　출력

일반사항

교과목명	디지털 디자인	**학수번호**	10786001	**이수**	전필
학점	3	**강의시간**	화1 ,화2 ,화3 ,화4	**강의실**	공과대학1-208
선수과목		**공학인증이수구분**			
교수소속	공과대학 건축학부	**교수성명**	최현철	**연락처**	
e-mail		**연구실**		**지도상담시간**	Tue. 14:00~16:00
홈페이지/카페					
온라인커뮤니티		Cyber Campus at Gachon Unv.			

가천대 6대 핵심역량 및 학과세부역량

문제해결	의사소통		합계
70	30		100%

강의개요 및 목표

강의개요

This class is designed for students to understand architectural geometry & parametric designand to achieve fundamental skills using Rhinoceros v5 and Grasshopper. The intent for this course is to introduce the students to 3D digital modelling tools in order to improve their skills, applying them to better their design works. To assure good understanding of the contents presented for lecture,4 assignments and 1 large project will be developed during lab sessions.

강의목표

Students can acquire the following abilities after taking this class. 1. To create, edit, analyze, and translate curves, surfaces, and solids with NURBS modeling by Rhino 5.0 2. To build form generators from the simple to the awe inspiring with graphical algorithms by Grasshopper 3. Projects will give an opportunity to synthesize all the relevant digital tools.

강의진행방법

PBL	플립러닝	토론/발표	

This Class introduces students architectural design methodologies using 3D computer modeling tools and how to apply them to their architecture studio design in detail. The class consists of 2

강의진행방법
hours lecture and 2 hours following-along with the lecture contents. 1) Lecture (2 hours) - Presentation of movie clips made by students explaining Grasshopper definitions - Watching movie clips introducing 3D modeling tools and work samples - Communication and discussion about parametric design methods 2) In-Class Practice (2 hours) - Using parametric modeling tools individually or in group

성적 평가 방법

평가요소	성적평가방법	비율
출석	Absences exceed four times : F	20
중간고사	Panel and 3D Model (Rhino and Grasshopper files + A3 Panel with Process and Details)	20
기말고사	Panel and 3D Model (Rhino and Grasshopper files + A3 Panel with Process and Details)	20
레포트	Movie Clips exlplaining of Grasshopper definitions	40
그룹프로젝트		0
기타	No Plagiarism : F	0
기타2	Flipped Learning Method	0
합계	100	

과제관련

과제명 및 과제작성방법 안내	제출일	제출물유형 및 제출방법
Mid-term project : 3D Modeling & 3D Printing - Parametric Modeling with Grasshopper and presentation of its concept and procedure - 3D Printing of Design and Panel Display	7th Week	.gh & pdf E-CLASS
Final project : 3D Modeling & 3D Printing - Parametric Modeling with Grasshopper and presentation of its concept and procedure - 3D Printing of Design and Panel Display	15th Week	.gh & pdf E-CLASS

*과제지연시패널티기준:

교재 및 참고문헌

구분	교재명	저자	출판사	출판년도
주교재	The Grasshopper Primer Third Edition | Foundations	Mode Lab	Grasshopper3D	2014
부교재	Rhinoceros Level 1 Training Manual v4.0	Rhinoceros	Rhinoceros	2014
참고자료				

강의규정(학습자유의사항)

No Plagiarism !!!

장애학생지원내용

Additional intimate support is available.

수업내용 및 학습활동

주차	기간	수업내용	비고
1	03/04 ~ 03/10	○ Subject : Rhino5 3D Modeling and Editing ○ Contents : 3D Geometry and 3D Commands ○ Methods : Lecture and Student Tutorials	3. 4(월)개강일
2	03/11 ~ 03/17	○ Subject : Rhino5 Data Management ○ Contents : Block, Group, and Layers ○ Methods : Lecture and Student Tutorials	
3	03/18 ~ 03/24	○ Subject : Introduction to Parametric Design ○ Contents : Grasshopper GUI ○ Methods : Lecture and Watching Video clips	
4	03/25 ~ 03/31	○ Subject : Grasshopper Basic tutorial - 1 ○ Contents : Simple Math and Data matching ○ Methods : Lecture and Student Tutorials	3.27(수)수업일수(1/4)
5	04/01 ~ 04/07	○ Subject : Grasshopper Basic tutorial - 2 ○ Contents : 2D Grid and 3D Points ○ Methods : Lecture and Student Tutorials	
6	04/08 ~ 04/14	○ Subject : Grasshopper Basic tutorial - 3 ○ Contents : Euclidean Transform and Attractors ○ Methods : Lecture and Student Tutorials	
7	04/15 ~ 04/21	○ Subject : Mid-term Project Presentation	
8			

주차	기간	수업내용	비고
	04/22 ~ 04/28	○ Subject : Grasshopper Tower Modeling - 1 ○ Contents : List Management ○ Methods : Lecture and Student Tutorials	4.22(월)~26(금)중간고사
9	04/29 ~ 05/05	○ Subject : Grasshopper Tower Modeling - 2 ○ Contents : 1D Domain and Graph ○ Methods : Lecture and Student Tutorials	
10	05/06 ~ 05/12	○ Subject : Grasshopper Tower Modeling - 3 ○ Contents : Vector and Plane ○ Methods : Lecture and Student Tutorials	
11	05/13 ~ 05/19	○ Subject : Grasshopper Tower Modeling - 4 ○ Contents : Surface Geometry with U, V and 2D Domain ○ Methods : Lecture and Student Tutorials	
12	05/20 ~ 05/26	○ Subject : Grasshopper Tower Modeling - 5 ○ Contents : Data Tree 1 ○ Methods : Lecture and Student Tutorials	5.20(월)수업일수(3/4)
13	05/27 ~ 06/02	○ Subject : Grasshopper Tower Modeling - 6 ○ Contents : Data Tree 2 ○ Methods : Lecture and Student Tutorials	
14	06/03 ~ 06/09	○ Subject : Grasshopper Tower Modeling - 7 ○ Contents : Detail Modeling and Visualization ○ Methods : Lecture and Student Tutorials	
15	06/10 ~ 06/16	○ Subject : Final Project Presentation	6.10(월)~14(금)기말고사
16	06/17 ~ 06/21	보강기간	보강기간