Course Title	ARCHITECTURAL DESIGN (IV)	Instructor	HSIAO, CHI-FU
Course Class	TEAXB4I DEPARTMENT OF ARCHITECTURE, 4I	Details	◆ General Course ◆ Required ◆ 2nd Semester
Relevance to SDGs	SDG4 Quality education SDG9 Industry, Innovation, and Infrastructure		

D e p a r t m e n t a l   A i m   o f   E d u c a t i o n

Ⅰ. Discern and understand current society and trends of development (Knowledge accumulation).

Ⅱ. Training of professionalism (Knowledge implementation).

  1. Learning of professional skills and practice.

  2. Cultivation of a character attending to social justice and public interest for architectural professionalism.

  3. Inspiring creative thinking in environment and architecture design discipline.

Ⅲ. Implementation of inter-disciplinary knowledge and team works (self-educating and growth).

Subject Departmental core competences

A. Abilities in architectural design, creativities, aesthetics, and cumulating of knowledge for the development of architectural professionalism.(ratio:30.00)

B. Competence of logical reasoning and judgment for issue discovering, information gathering, analysis and problem solutions, and integration conceptual thinking into physical forms.(ratio:30.00)

C. Understanding and application of fundamental mathematics and science skills.(ratio:5.00)

D. Understanding of knowledge from socio-cultural, humanity and psychology disciplines for applications in architectural thinking and problem resolutions.(ratio:5.00)

E. Competence in implementation of architectonics, construction, and architectural practices. (ratio:10.00)

F. Understanding the functioning of ecological and urban environment and applying in architectural and urban design process.(ratio:5.00)

G. Application of information technology for creative works and enhancing communication ability.(ratio:5.00)

	H. Prepared for planning management、effective communication and team-work, understanding of professional ethics and social responsibilities, highly pertinent to current affairs and global perspective.(ratio:10.00)

Subject Schoolwide essential virtues
1. A global perspective. (ratio:10.00)
2. Information literacy. (ratio:25.00)
3. A vision for the future. (ratio:25.00)
5. Independent thinking. (ratio:40.00)

Course Introduction	This course is divided into two parts: (1) interactive digital modeling methods, (2) real-time information capture into building information model. This course integrates information technology and ubiquitous computing into architectural design process.

The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.

Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.

 I. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of
          the course's veracity, conception, procedures, outcomes, etc.
II.Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal,
          morals, attitude, conviction, values, etc.
III.Psychomotor: Emphasis upon the study of the course's physical activity and technical
          manipulation.

No.	Teaching Objectives	objective methods
1	applying information technology into architectural design	Cognitive
2	the practices of applying information technology into architectural design	Psychomotor

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCDEFGH	1235	Lecture, Practicum, Experience	Discussion(including classroom and online), Practicum

2	ABCDEFGH	1235	Lecture, Practicum, Experience	Discussion(including classroom and online), Practicum, Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	111/02/21~111/02/25	indroducing the information ideas in architecture design	
2	111/02/28~111/03/04	conscept discussion	
3	111/03/07~111/03/11	sketch discussion	
4	111/03/14~111/03/18	comupter models I	
5	111/03/21~111/03/25	comupter models II	
6	111/03/28~111/04/01	parameters and programs I	
7	111/04/04~111/04/08	parameters and programs II	
8	111/04/11~111/04/15	parameters and programs III	
9	111/04/18~111/04/22	mid-review	
10	111/04/25~111/04/29	Midterm Exam Week	
11	111/05/02~111/05/06	XR and digital twin connection	
12	111/05/09~111/05/13	XR and physical feedback	
13	111/05/16~111/05/20	user test and feedback	
14	111/05/23~111/05/27	evluation and optimization I	
15	111/05/30~111/06/03	evluation and optimization II	
16	111/06/06~111/06/10	final-review	
17	111/06/13~111/06/17	protfolio making	
18	111/06/20~111/06/24	Final Exam Week	

Requirement	

Teaching Facility	Computer, Projector
Textbooks and Teaching Materials	self-edited sliders and textbook
References	The Experience of 2020 Will Initiate Long-Awaited Growth In Enterprise Augmented, Mixed, And Virtual Reality, 2020, Forester report. Benedikt Gross, Hartmut Bohnacker, Julia Laub and Claudius Lazzeroni. Generative Design. 2018, Princeton Architectural Press. https://www.unrealengine.com/en-US/xr
Number of Assignment(s)	(Filled in by assignment instructor only)
Grading Policy	◆ Attendance： 5.0 % ◆ Mark of Usual：25.0 % ◆ Midterm Exam： 25.0 % ◆ Final Exam： 45.0 % ◆ Other 〈 〉： %
Note	This syllabus may be uploaded at the website of Course Syllabus Management System at http://info.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php . ※ **Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.**