Tamkang University Academic Year 112, 2nd Semester Course Syllabus

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 SDG11 Sustainable cities and communities		

Departmental Aim of Education

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:20.00)
3. A vision for the future. (ratio:20.00)
4. Moral integrity. (ratio:5.00)
5. Independent thinking. (ratio:30.00)
6. A cheerful attitude and healthy lifestyle. (ratio:5.00)
7. A spirit of teamwork and dedication. (ratio:5.00)
8. A sense of aesthetic appreciation. (ratio:5.00)

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	12345678	Lecture, Discussion, Publication, Practicum, Experience, Imitation	Study Assignments, Discussion(including classroom and online), Practicum, Report(including oral and written), Activity Participation
2	ABCDEFGH	12345678	Discussion, Publication, Practicum, Experience, Imitation	Study Assignments, Discussion(including classroom and online), Practicum, Report(including oral and written)

Course Schedule			
Week	Date	Course Contents	Note
1	113/02/19 ~ 113/02/25	introduction	
2	113/02/26 ~ 113/03/03	concept and anaylsis I	
3	113/03/04 ~ 113/03/10	concept and anaylsis II	
4	113/03/11 ~ 113/03/17	anaylsis programming I	
5	113/03/18 ~ 113/03/24	anaylsis programming II	
6	113/03/25 ~ 113/03/31	anaylsis programming III	
7	113/04/01 ~ 113/04/07	parameter and figures I	
8	113/04/08 ~ 113/04/14	parameter and figures II	
9	113/04/15 ~ 113/04/21	Midterm Exam Week	
10	113/04/22 ~ 113/04/28	concept modeling I	
11	113/04/29 ~ 113/05/05	concept modeling II	
12	113/05/06 ~ 113/05/12	site and environment optimize	
13	113/05/13 ~ 113/05/19	site and environment optimize	
14	113/05/20 ~ 113/05/26	drawing, detail and physical modeling I	
15	113/05/27 ~ 113/06/02	drawing, detail and physical modeling II	
16	113/06/03 ~ 113/06/09	final review	

17	113/06/10～ 113/06/16	Final Exam Week (Date:113/6/11-113/6/17)	
18	113/06/17～ 113/06/23	Flex week, learning activities should be arranged.	

Key capabilities	Information Technology Problem solving
Interdisciplinary	Competency-based education 'competency exploration' sustained competency or global issues STEEP (Society, Technology, Economy, Environment, and Politics) In addition to teaching content of the teacher's professional field, integrate other subjects or invite experts and scholars in other fields to share knowledge or teaching
Distinctive teaching	Game-based learning courses Project implementation course Special/Problem-Based(PBL) Courses Learning technologies (such as AR/VR,etc.) incorporated to physical courses
Course Content	Computer programming or Computer language (students have hands-on experience in related projects) Logical Thinking Sustainability issue
Requirement	
Textbooks and Teaching Materials	Self-made teaching materials:Presentations Name of teaching materials: custom powerpoint slider
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.
Grading Policy	◆ Attendance： 10.0 % ◆ Mark of Usual：10.0 % ◆ Midterm Exam： 30.0 % ◆ Final Exam： 50.0 % ◆ 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.**