

## Tamkang University Academic Year 109, 1st Semester Course Syllabus

Course Title	ARCHITECTURAL STRUCTURAL SYS.	Instructor	JONG-DAR YAU
Course Class	TEAXB3A DEPARTMENT OF ARCHITECTURE, 3A	Details	<ul style="list-style-type: none"> <li>◆ General Course</li> <li>◆ Required</li> <li>◆ One Semester</li> </ul>
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			
<p>I . Discern and understand current society and trends of development (Knowledge accumulation).</p> <p>II. Training of professionalism (Knowledge implementation).</p> <p>1. Learning of professional skills and practice.</p> <p>2. Cultivation of a character attending to social justice and public interest for architectural professionalism.</p> <p>3. Inspiring creative thinking in environment and architecture design discipline.</p> <p>III. Implementation of inter-disciplinary knowledge and team works (self-educating and growth).</p>			
Subject Departmental core competences			
<p>B. Competence of logical reasoning and judgment for issue discovering, information gathering, analysis and problem solutions, and integration conceptual thinking into physical forms.(ratio:20.00)</p> <p>C. Understanding and application of fundamental mathematics and science skills.(ratio:50.00)</p> <p>E. Competence in implementation of architectonics, construction, and architectural practices. (ratio:30.00)</p>			
Subject Schoolwide essential virtues			
<p>2. Information literacy. (ratio:20.00)</p> <p>5. Independent thinking. (ratio:40.00)</p> <p>7. A spirit of teamwork and dedication. (ratio:20.00)</p> <p>8. A sense of aesthetic appreciation. (ratio:20.00)</p>			

Course Introduction	Development of structural forms, Structural actions, Structural materials, Construction and form, Structural elements, complete structures: early forms, Contemporary wide-span structures, Bridges, Multi-story buildings and structures, Structural understanding and design.
---------------------	---

**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	Students will be able to summarize building structures covered in the following concepts: (1) Development of structural forms, (2) Structural actions, (3) Structural materials and (4) Construction and form.	Affective

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	BCE	2578	Lecture, Discussion, Experience	Discussion(including classroom and online), Practicum, Report(including oral and written)

**Course Schedule**

Week	Date	Course Contents	Note
1	109/09/14 ~ 109/09/20	Review of fundamentals of structures	
2	109/09/21 ~ 109/09/27	Properties of Constructional Materials and characteristics of structures	

3	109/09/28 ~ 109/10/04	Outdoor teaching activities in TKU campus (1 made-up on 26 Sept.)	
4	109/10/05 ~ 109/10/11	Double-Ten festival	
5	109/10/12 ~ 109/10/18	Seismic resistance of RC structures (I) Shear wall system (Dual system)	
6	109/10/19 ~ 109/10/25	Outdoor teaching activities in TKU campus (2 made-up on 26 Sept.)	
7	109/10/26 ~ 109/11/01	Seismic resistance of RC structures (II) Shear wall system (Dual system)	
8	109/11/02 ~ 109/11/08	Seismic resistance of SC structures (I) steel beam and column	
9	109/11/09 ~ 109/11/15	Seismic resistance of SC structures (II) Bracing systems (Dual system)	
10	109/11/16 ~ 109/11/22	Midterm Exam Week	
11	109/11/23 ~ 109/11/29	High rise building structural systems (I)	
12	109/11/30 ~ 109/12/06	High rise building structural systems (II)	
13	109/12/07 ~ 109/12/13	Form active structures (Compression type)	
14	109/12/14 ~ 109/12/20	Form active structures (Tensile type)	
15	109/12/21 ~ 109/12/27	Wind tunnel test of high-rise building models(I)	
16	109/12/28 ~ 110/01/03	Wind tunnel test of high-rise building models(II)	
17	110/01/04 ~ 110/01/10	Discussion of term project	
18	110/01/11 ~ 110/01/17	Final Exam Week	
Requirement		For the student studying this course is absent over 4 times, his/her final term-project would be excluded. 修課學生缺席4次(含)以上, 不得參加期末報告	
Teaching Facility		Computer, Projector	
Textbooks and Teaching Materials		H. Engel (1997) Structure Systems, Gerd Hatje Publishers	

Number of Assignment(s)	(Filled in by assignment instructor only)
Grading Policy	<p>◆ Attendance : 20.0 %    ◆ Mark of Usual : 20.0 %    ◆ Midterm Exam : 30.0 %</p> <p>◆ Final Exam : 30.0 %</p> <p>◆ Other (    ) :        %</p>
Note	<p>This syllabus may be uploaded at the website of Course Syllabus Management System at <a href="http://info.ais.tku.edu.tw/csp">http://info.ais.tku.edu.tw/csp</a> or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at <a href="http://www.acad.tku.edu.tw/CS/main.php">http://www.acad.tku.edu.tw/CS/main.php</a>.</p> <p><b>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</b></p>