朝陽科技大學 092學年度第1學期教學大綱
Building Frame System 建築結構系統

當期課號	4007	Course Number	4007
授課教師	鄭茂川	Instructor	CHENG,MAO CHUAN
中文課名	建築結構系統	Course Name	Building Frame System
開課單位	建築系(二日)三A	Department	
修習別	必修	Required/Elective	Required
學分數	2	Credits	2
課程目標	使學生瞭解建築結構系統的一些基本性質，讓同學能以邏輯的系統思考方式來分析建築結構問題，並明瞭建築造型與結構系統之間的關係，深刻感受到利用結構系統的知識可以發展更多特殊的造型，啓迪學生造型的能力，兼顧建築中的理性與感性因子。課程內容有兩大部份，第一部份介紹較基本的課題，例如: 建築物之荷重、材料的應力以及材料基本性質; 第二部份則深入論述結構系統的種類，例如:向量作用結構系統、體積作用結構系統、形態作用結構系統、面作用結構系統以及高樓結構系統; 除此之外，亦將論及耐震和隔震結構等較特殊的主題。	Objectives	In this course of Building Structure Systems, students can learn some fundamental building structural subjects while at the same time developing their logical system-thinking and problem-solving abilities. In addition, this course can make students realize the relationship between structural systems and architectural forms, the relationship between rational and perceptual factors in architecture.This course covers two major topics of Building Structure Systems. The first topics include how the loadings to act on the building, the stress and character of the architectural components. The second topics are the types of Structure Systems. They are Vector-active Structure Systems, Volume-active Structure Systems, Form-active Structure Systems, Surface-active Structure Systems and Height-active Structure Systems.
教材	板書並配合講義、幻燈片、教學錄影帶、建築結構作品研討	Teaching Materials	
成績評量方式	平時成績20% 模型25% 報告書15% 期中考20% 期末考20%	Grading	Modeling-Making,25% Report,15% Mid-term,20% Final-termn,20%
教師網頁			
教學內容	第一單元 結構系統緒論（1節） 第二單元 建築物之荷重（3節） 第三單元 結構材料的性質（3節） 第四單元 結構材料的基本應用（3節） 第五單元 向量作用結構系統¾桁架系統（4節） 第六單元 體積作用結構系統¾樑及構架系統（4節） 第七單元 形態作用結構系統¾纜索及拱系統（4節） 第八單元 面作用結構系統¾膜及薄殼系統（4節） 第九單元 高樓結構系統（4節）	Syllabus	The contents of this course analyze the factors of influence on architectural structure. Besides, the vector-active structural system, the bulk-active structural system, the surface-active structural system, the form-active structural system and the high-rise building structure are also included. Further more, the characteristics, the principles of mechanics and the destruction-reinforcement mode are studied in each of the systems mentioned above. Again, we hope to use some elaborately designed examples of high-rise building, long-span, and special architecture case studies for analysis, students are expected to be able to use these knowledge as professional architects to communicate with professional structural engineer in this field. Even, an architecture student being a professional structure student being a professional structural engineer in the future is also possible.

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