

Structural Analysis and Finite Element (CIEE 712 / IMSC012)

Semester Syllabus

Part 1: Course Information

Instructor Information

Instructor: Prof. Er Guokang

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Course Description

This course focuses on the following topics: finite element modeling for analysis of tall buildings, frame structure, shear wall structure, wall-frame structure, space structure, core structure, and core wall structure, tube structure, outrigger-braced structure, giant structure, stability and dynamics of structures, the analysis and behavior of various structures.

Prerequisite

None

Course Duration

42 contact hours, 3 hours per week (3-credit course)

Credit: 3

Compulsory/elective course: Elective

Part 2: Course Objectives

1. Introduce to students the various types of structures in high-rise building design.
2. Introduce to students the modeling and analysis of various structures.
3. Introduce to students the behavior of various structures.
4. Introduce to students the stability and dynamics of the structures.
5. Introduce to students some research topics in high-rise building analysis.

Part 3: Major Assessment Methods

Homework:	20%
Project:	30%
Written exam:	50%