İstanbul Technical University – Department of Architecture

MIM 378E – Tall Building Structures CRN 22352

Course Syllabus | 2019-2020 Spring Semester

Course Day and Hour : Tuesday, 13:30-16:30
Course Room :
Course Credit : 3
Course Web Site :

Course Instructor: Assistant Prof. Dr. Halet Almıla Büyüktaşkın
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Course Assistant/s:
e-mail:
Office no:

Course Description

After a brief introduction with the history of the tall buildings, loads and design criteria, structural systems used for tall buildings such as frame systems, shear walls systems, frame + shear walls systems, core systems, tubular systems and diagrid systems will be examined. Typical examples related to all structural system types will be evaluated.

Course Structure and Plan

Course Plan

WEEK	DATE	TOPIC
1	11.02.2020	Introduction, Tall Building Definition and History
2	18.02	General Concepts related to Tall Buildings, Loads, Design Parameters which are effective on Structural System Choice
3	25.02	Structural System Choices for Tall Buildings: Frame Systems, Structural System Choices for Tall Buildings: Shear Walls and Frame +Shear Walls
4	03.03	Structural System Choices for Tall Buildings: Core Systems
5	10.03	Structural System Choices for Tall Buildings: Tubular Systems
6	17.03	Structural System Choices for Tall Buildings: Diagrid Systems
7	24.03	Term Project Presentations
8	07.04	Term Project Presentations
9	14.04	Term Project Presentations
10	21.04	Term Project Presentations
11	28.04	Term Project Presentations
12	05.05	Final Project Studies
13	12.05	Final Project Studies
14	19.05	National Holiday

Recommended Readings

- Wells, M., Skyscrapers Structure and Design, 2005, Laurence King Publishing Ltd.
- Tall Building Systems and Concepts, Council on Tall buildings & Urban Habitat, Vol.Sc., USA.
- -Özgen, A., Sev, A., 2000, Çok Katlı Yüksek Binalarda Taşıyıcı Sistemler,Birsen Yayınevi.
- -Hasgür, Z., Gündüz, A.N., 1996, Betonarme Çok Katlı Yapılar, Beta Basım Yayın.
- -Özgen, A., Uzgider, E., Arda, T.S., 1986, Çok Katlı Çelik Yapılar, İ.T.Ü. İnş.Fak.

Course Assessment

Final grade is based together on the term project and the final project.

- Term Project: Research and presentation of an existing tall building.
- Final Project: An essay project on a tall building design focused specially on its structural system.

Final grading scheme is: 50% Term Project + 50% Final Project.
70% attendance is required.

Note : Above Sections are given as minimum requirements. Faculty members are free to arrange the following sections and add additional sections as needed.