

Course Name:

Tall Buildings

Course Number: 20-128	Credit: 3
Program: Graduate	Course Type: Technical Selective
Prerequisite: -	Corequisite: -

Course Description (Objectives):

The main goal of this course is to familiarize students with the principles and fundamentals of structural design for tall buildings. Classroom activities include exercises, design projects, and research assignments related to the course topics.

Course Content (outline):

- Chapter 1: Concepts and general overview
- Chapter 2: Introduction to structural systems and real-world examples of tall buildings
- Chapter 3: Lateral load-resisting systems in tall steel, concrete, and composite buildings
- Chapter 4: Vertical load-resisting systems in tall steel, concrete, and composite buildings
- Chapter 5: Wind effects on tall building structures
- Chapter 6: Earthquake effects on tall buildings
- Chapter 7: Analytical methods for tall buildings
- Chapter 8: Design principles for components of tall buildings
- Chapter 9: Special issues and building codes
- Chapter 10: Floor diaphragms, façade issues, construction staging effects, and floor vibrations
- Chapter 11: Project

References:

- Steel, concrete and composite design of tall buildings, B. S. Taranath, (1998), McGraw Hill Co.
- Structural analysis and design of tall buildings, B. S. Taranath, (1988), McGraw Hill Co.
- Structural systems for tall buildings, Council on tall buildings and urban habitat, (1995), McGraw Hill Co.
- Tall building structures, B. Stafford Smith and A. Coull