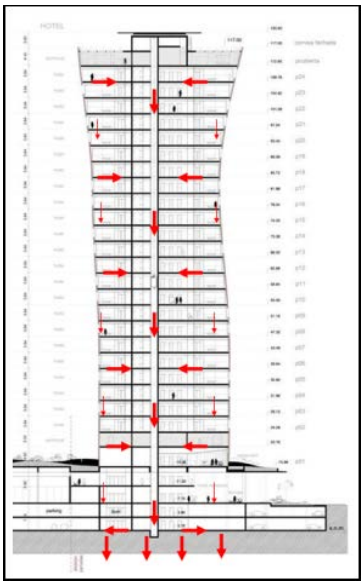

Department of Civil Engineering
Fall 2024
CE 5357 Structural Load Models

Instructor: Dr. Carlos Ferregut
Office: Engineering 225-A
Phone: 747-6921
Email: ferregut@utep.edu

Office Hours: You can come by my office any time but I may be out of my office. If you cannot find me, please make an appointment with the Civil Engineering Administrative Assistant Mrs. Concha Ruiz.

Prerequisites: Structural Analysis, Probability and Statistics, Calculus I

Reference book: **Minimum Design Loads for Buildings and Other Structures**
ASCE Standard ASCE/SEI 7-16 or ASCE/SEI 7-22

Course Objectives: Familiarize students with the most common models and modeling processes for the loads affecting buildings, bridges and other civil engineering structures.

Grades: Grades will be based on homework, projects and class presentations.

Grading Policy:

The grading scale is:

A	≥ 90
B	≥ 80 but < 90
C	≥ 70 but < 80
D	≥ 60 but < 70
F	< 60

Homework: Homework problems are due on: TBD

Your work will be read and scrutinized by others throughout your career as an engineer. Many times your calculations will be transformed into real physical objects. While mistakes and a lack of clarity are easily corrected on paper, they are much harder and more costly to correct once the concrete has set or the steel has been welded. In some instances your design calculations could become a legal document or a piece of evidence in a court of law. It is your responsibility that the work you prepare is presented in a legible, methodical, and logical manner. You will be required to submit organized, clear, concise work in this course, not to punish you or force you to do something you may consider a waste of time, but rather to get you in the habit of presenting your work in a professional manner. Remember that the purpose of your homework is to convince the the instructor that you know how to get to the correct answer. Always look at your work and ask yourself, "does this paper demonstrate that I know what I am doing?"

Homework and projects are individual. You can discuss the problems with your classmates, or instructor, but do not copy solutions or work from each other or from other sources.

Projects: The reports will be graded on the basis of design ingenuity, clarity, use of graphics, grammar, overall quality and technical presentation.

Academic Dishonesty: Any instance of cheating or plagiarism will be reported to the Dean of Students for appropriate action (which includes possible failure in the course and/or permanent dismissal from the University).

Topics covered

1 Basic Concepts of Structural Reliability
2. Design formats, safety factors and load combinations
2. Dead Loads, Soil Loads and Hydrostatic Loads
3. Live Loads
5. Snow Loads
7. Wind Loads
8. Earthquake Loads
9. **Industry Specific Loads**