

CEE262B: Structures in the Urban Environment
Lab Syllabus and Assignments, Spring 2023

WEEK	LAB #	LOCATION	ACTIVITY	Lab Due	Prob. Set Due
Week 1 30-3 Feb	odd: B01, B03, B05... even: B02, B04, B06...		LABS CANCELLED WEEK 1		
Week 2 6-10 Feb	odd	E110	SA1. Stress and Cables (PS1, PS2)		
	even	E311	SA1. Stress and Cables (PS1, PS2)		
Week 3 13-17 Feb	odd	E110	L1a. Wash. Mon. & Breaking Wires		PS1 (Feb 17)
	even	E311	L1b. Cable Shape & Graphic Statics		
Week 4 20-24 Feb	odd	E311	L1b. Cable Shape & Graphic Statics		PS2 (Feb 24)
	even	E110	L1a. Wash. Mon. & Breaking Wires		
Week 5 27-3 Mar	odd	E110	L2. Quebec & Menai Bridges	L1 (lab day)	
	even	E311	SA2. Wind and Moment (PS3)	L1 (lab day)	
Week 6 6-10 Mar	odd	E311	SA2. Wind and Moment (PS3)	---	
	even	E110	L2. Quebec & Menai Bridges	---	
Week 7 20-24 Mar	odd	E110	L3. Eiffel Tower & Wash. Mon.		PS3 (Mar 24)
	even	E311	SA3. Tall Bldgs: Wind and Gravity (PS4)		
Week 8 27-31 Mar	odd	E311	SA3. Tall Bldgs: Wind and Gravity (PS4)	L2 (lab day)	
	even	E110	L3. Eiffel Tower & Wash. Mon.	L2 (lab day)	
Week 9 3-7 Apr	odd	E110	L4a. Design Bridge		PS4 (Apr 7)
	even	E311	L4a. Design Bridge		
Week 10 10-14 Apr	odd	E311	L4a. Build Bridge	L3 (lab day)	
	even	E110	L4a. Build Bridge	L3 (lab day)	
Week 11 17-21 Apr	odd	E110	L4b. Form-finding with plaster		PS5 (Apr 21)
	even	E417	L4b. Form-finding with plaster		
Week 12 24-28 Apr	odd	E110	L4. Load testing bridges and shells		
	even	E110	L4. Load testing bridges and shells		
L4 (Deans Date)					

LABS (L)

L1. Stress in Tensile and Compressive Structures

- a. Washington Monument and Breaking Wires
- b. Cable Shape and Graphic Statics

L2. Bridges - Suspension and Horizontal Cantilever:

L3. Tall Buildings: Columns and Cantilevers

L4. Designing a Bridge and a Shell

- a. bridge design
- b. shell design

STRUCTURAL ANALYSIS (SA)

SA1. Stress, Efficiency, Safety Factors and Cables (PS1, PS2)

SA2. Wind and Moment (PS3)

SA3. Tall Bldgs: Wind and Gravity (PS4)

PROBLEM SETS (PS)

PS1: Columns and Stress

PS2: Cables and Suspension Bridges

PS3: Wind, Moment, Eiffel Tower

PS4: Wind, Gravity, Hancock Tower

PS5: Domes: Shapes, Loads, Supports