SE 180 Earthquake Engineering Syllabus

M, W, F  1:00 – 1:50  CSB 001
F  3:00 – 3:50  CSB 001

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Week 0
9/22: Course Syllabus, Part 1 of Survey (last 10 minutes of 1st day), & Single-Degree-of-Freedom (SDOF) and Response Spectrum
   - Read Earthquake San Diego Danger Zones
   - Assignment 1: Earthquake San Diego Danger Zones

Week 1
9/25: Single-Degree-of-Freedom (SDOF) and Response Spectrum (continued)
9/27: Single-Degree-of-Freedom (SDOF) and Response Spectrum (continued)
   - Assignment 2: 1st Webshaker Project
9/29: Single-Degree-of-Freedom (SDOF) and Response Spectrum (continued)
9/29: Introduction to Lab Project
   - Assignment 3: SDOF & Response Spectrum
   - Assignment 4: Elastic Design Spectrum

Week 2
10/2: Single-Degree-of-Freedom (SDOF) Numerical Methods
10/4: Single-Degree-of-Freedom (SDOF) Numerical Methods (continued)
   - Assignment 5: SDOF Numerical Methods
10/6: Bracing
10/6: Bracing (continued)
   - Assignment 6: Bracing

Week 3
10/9: Introduction to the Frequency Domain
10/11: Pick up materials for Lab Project & begin model assembly
10/13: Test unbraced SDOF models
10/13: Test unbraced SDOF models

Week 4
10/16: Test braced SDOF models
10/18: Test braced SDOF models
10/20: Seismic Waves
10/20: Seismic Waves (continued)
   - Assignment 7: Seismic Waves
Week 5
10/23: Earthquake Magnitude
10/25: Earthquake Magnitude (continued)
   • Assignment 8: Earthquake Magnitude
10/27: Mercalli Intensity Scale & Earthquake Energy Release Mechanisms
   • Assignment 9: Mercalli Intensity Scale
10/27: Earthquake Energy Release Mechanisms (continued)
   • Assignment 10: Earthquake Energy Release Mechanisms

Week 6
10/30: 1st Midterm
11/1: Uniform Building Code
11/3: Uniform Building Code (continued)
   • Assignment 11: Uniform Building Code
11/3: Multi-Degree-of-Freedom Shear Frames

Week 7
11/6: MDOF Systems and Modal Analysis
11/8: MDOF Systems and Modal Analysis (continued)
   • Assignment 12: 2nd Webshaker Project
11/10: Veteran’s Day Holiday

Week 8
11/13: MDOF Systems and Modal Analysis (continued)
11/15: MDOF Systems and Modal Analysis (continued)
11/17: MDOF Systems and Modal Analysis (continued)
   • Assignment 13: MDOF Systems and Modal Analysis

Week 9
11/20: MDOF Systems and Modal Analysis – Numerical Methods
11/22: MDOF Systems and Modal Analysis – Numerical Methods (continued)
11/24: Thanksgiving

Week 10
11/27: Base Isolation
11/29: Earthquake Effects on Structures
   • Assignment 14: Earthquake Effects on Structures
12/1: Earthquake Preparedness
   • Assignment 15: Review of Earthquake Engineering Websites
12/1: Review for Final Exam

Finals Week
12/6: Final Exam 11:30 – 2:30 PM