

C&EE 243B: RESPONSE & DESIGN OF RC STRUCTURAL SYSTEMS COURSE OUTLINE

Professor John Wallace
Spring 2002

WEEK	TOPIC	READING/ASSIGNMENT
1	Review - Dynamics M, K, C matrices Modal analysis Elastic response spectrum analysis	Homework
2	Collapse Mechanism analysis Pushover Analysis - overview	Handout/Examples Handout/Examples
3	Response Spectra Elastic/Inelastic Displacement/Acceleration Code Equivalent	UBC-97, Papers Handouts UBC-97, Papers
4	Seismic Design Prescriptive Performance-Based Design	UBC-97, ACI-318, FEMA 349 ACI 318-02 Introduction/Background, PEER Center
4	Displacement-Based Design Displacement Estimates Wall Design - Review	Handout Papers/ACI 318-02/FEMA 273
5/8	Seismic Rehabilitation Coefficient Method Capacity Spectrum Acceptance criteria Wall Design Frame Design	FEMA 273/274 ATC 40 Example – FEMA 273 Example – FEMA 273
8/9	Structural Modeling Mass/Stiffness Strength/Damping	SAP2000, DRAIN-2DX, XLINEA
10	Course Project Discussion	FEMA 273/274, ATC 40
11	FINAL EXAM (Project Presentations)	