

CEE511 - Structural Dynamics (3 Credits)
Fall Semester 2008-2009
Course Outline

Date	Class	Title
9/3	1	An Overview of Structural Dynamics
9/8	2	Formulation of SDOF System Equations
9/10	3	Free Vibration of Undamped SDOF Systems
9/12 (Fri)	4	Free Vibration of Damped SDOF Systems
9/15	5	Characterization of SDOF Dynamic Properties
9/17	6	Harmonic Loads on SDOF Systems
9/22	-	<i>NO CLASS</i>
9/24	-	<i>NO CLASS</i>
9/29	7	Harmonic Loads on SDOF Systems (Cont.)
10/1	8	Base Excitation of SDOF Systems
10/3 (Fri)	9	Introduction to Accelerometers
10/6	10	Periodic Loads on SDOF Systems
10/8	11	Impulsive Loading and Convolution Integral
10/13	12	Introduction to Numerical Integration
10/15	13	Newmark Numerical Integration
10/22	14	Response Spectra of SDOF Systems
10/27	15	Response versus Design Spectra
10/29	-	<i>MIDTERM</i> [in class]
11/3	16	Lump Mass MDOF Structures
11/5	17	Distributed Mass MDOF Structures
11/10	18	Formulation of Mass and Stiffness Matrices
11/12	-	<i>NO CLASS</i>
11/17	19	Free Vibration of MDOF Systems
11/19	20	Generalized Eigenvalue Problem, Frequencies and Mode Shapes
11/21 (Fri)	21	Modal Superposition
11/24	22	Examples of Modal Superposition
11/26	23	Forced Vibration of MDOF Systems
12/1	24	Orthogonal Damping Matrices
12/3	25	Modal Response Contributions
12/8	26	Modal Contribution for Earthquake Driven MDOF Systems
		Response Spectra for MDOF Systems

Make Slot: Fridays, 3:30 - 5pm (2315 G G Brown)

Midterm Exam: Wednesday, October 29, 2008, 5 pm (2315 G. G. Brown)

Final Exam: Thursday, December 11, 2008, 10:30-12:30 pm (Room TBD)