JOINT INSTITUTE
交大密西根学院
UNIVERSITY OF MICHIGAN – SHANGHAI JIAO TONG UNIVERSITY

Vm 440 *Inermediate Dynamics and Vibration*, Summer 2014

Instructor: Chong-Won LEE, Professor Emeritus, KAIST
email: cwlee@kaist.ac.kr; cell phone: 159 0161 9030; Room #401, JI Bldg.

Text: *Engineering Vibration* by D. J. Inman, *4th Edition*, Pearson (2014).

References: L. Meirovitch, *Fundamentals of Vibrations*, Waveland Pr. Inc., 2010
(For Analytical Mechanics)
D. T. Greenwood, Advanced Dynamics, Cambridge University Press, 2003
L. Meirovitch, *Principles and Techniques of Vibrations*, Prentice-Hall, Inc., 1997
L. Meirovitch, *Analytical Methods in Vibrations*, McMillan, 1967

Lectures: M & W 10:00-11:40, F(conditional) 10:00-11:40
Room: **F102(M/F), F103(W)**, Dong Xia Yuan
Office hours: M/W 13:00-14:00, F(lecture day) 13:00-14:00

Assignments: There will be 6 sets of homework problems. Only the toolbox problems are to be submitted, but at least one from the rest of the homework problems will be chosen with some modifications for the immediately followed quiz or exam.

Quizzes and Exams: There will be approximately three quizzes. And three Examinations, two midterm and one final, will be given during regular sessions. There will be no lecture on the day of exams.

Tentative Grading scheme:

Homework (toolbox problems)	10%
3 Quizzes	15%
2 Midterms	50%
Final	30%
Total	100%
Class Participation/Attendance up to	±10%

Lecture Schedule (**Tentative**)

Week	Date	Contents	Hmwk Due	Remark
1	5/12(M)	Ch. 1 SDOF		
	5/14(W)			
	5/16(F)			
2	5/19(M)			
	5/21(W)	Ch. 2 Harmonic Response of SDOF	Hmwk#1	
3	5/27(M)	**Quiz #1** (for Chap.1)		
	5/29(W)			
	5/31(F)			
4	6/2(M)	Holiday		
	6/4(W)	Ch. 3 Forced Response of SDOF	Hmwk#2	
	6/6(F*)	**Make-up #1**		
5	6/9(M)	**Midterm Exam #1**	Chap. 1 &2	
	6/11(W)			
	6/13(F)	**Review of SDOF system**		
6	6/16(M)	Ch. 4 (up to Sec.4.6) 2DOF systems	Hmwk#3	
	6/18(W)	**Quiz #2** (for Chap.3)		
	6/20(F*)	**Make-up #2,** Ch. 5 Vibration Isolation		
7	6/23(M)			
	6/25(W)		Hmwk#4	
	6/27(F)	**Midterm Exam #2**	Chap. 3&5, 4.1-4.6	
8	**6/30(M)**	**No lecture** (Make-up on June 6)		
	7/2(W)	**No lecture** (Make-up on June 20)		
9	7/7(M)	Analytical Mechanics (sec 4.7)		
	7/9(W)			
	7/11(F)			
10	7/14(M)			
	7/16(W)	Ch.4(from Sec. 4.8) MDOF		
11	7/21(M)		Hmwk#5	
	7/23(W)	**Quiz #3** (for Analytical Mech)		
	7/25(F)	Ch.6		
12	7/28(M)			
	7/30(W)		Hmwk#6	
13	8/4(M)	***Final Exam***	Anal Mech, Chap. 6, Sec 4.7-4.8	
	8/9(W)			