

Subject (English)	Mechanical Vibrations I		Semester	Fall* Quarter Subject	Day/Slot	Mon. / 2 nd 10:30-12:00 Fri. / 2 nd 10:30-12:00
科目名 (日本語)	機械力学 I					
Course Code	TB14025	Course Numbering	TMA-MEE213		Period	Oct. 4, 2019 – Nov. 22, 2019*
Instructor (Post)	Mitsuhiro HAYASHIBE (Prof.)		*This is a Quarter Subject . Make sure not to conflict with other courses.		Campus	Aobayama
					Building	Mechanical Engineering Research Bld. No. 2
Faculty	School of Engineering		Credits	2	Class Room	2-214 (2 nd floor)
Class subject	To acquire fundamental knowledge regarding dynamic problems which may arise in machinery.					
Object and summary of class	To learn dynamic characteristics of the systems with one, two and multi degrees of freedom obtained by modeling machinery.					
Keywords	-					
Goal of study	To acquire the ability to apply the knowledge obtained in this class to engineering design.					
Contents and progress schedule of class						
No.	Date	Contents				
1	10/4	Introduction and fundamental mathematics				
2	10/5	Free vibrations of one-degree-of-freedom systems (I)				
3	10/7	Free vibrations of one-degree-of-freedom systems (II)				
4	10/11	Free vibrations of one-degree-of-freedom systems (III)				
5	10/14	Forced vibrations of one-degree-of-freedom systems				
6	10/19	Free vibrations of one-degree-of-freedom systems with viscous damping (I)				
7	10/21	Free vibrations of one-degree-of-freedom systems with viscous damping (II)				
8	10/25	Free vibrations of one-degree-of-freedom systems with viscous damping (III)				
9	10/28	Forced vibrations of one-degree-of-freedom systems with viscous damping				
10	11/1	Free vibrations of two-degree-of-freedom systems (I)				
11	11/8	Free vibrations of two-degree-of-freedom systems (II)				
12	11/11	Forced vibrations of two-degree-of-freedom systems				
13	11/15	Vibrations of multi-degree-of-freedom systems				
14	11/18	Summary				
15	11/22	Summary and examination				
Preparation	Fundamental knowledge on Mathematics I and Mechanics are required.					
Record and evaluation method	-					
Textbook and references	Mechanical Vibrations SI (5th Edition) S. S. Rao Mechanical Vibrations S. G. Kelly An Introduction to Mechanical Vibrations, (3rd Edition) R. F. Steidel, Jr.					
Self study	Students are required to review each class for one to two hours. If there remain any parts they cannot understand, they should ask questions.					
In addition	-					