

Shenyang Aerospace University

TENTATIVE SCHEDULE		
Week	Class Hour	TOPIC/ACTIVITY
WEEK 2	2	Introduction to the course
	4	The concepts of link, kinematic pairs and mechanisms, types of pairs The kinematic diagram of mechanism
WEEK 3	6	The conditions for a mechanism to have determined motion Degree of freedom of a mechanism
	8	Points for attention during the calculation of DOF Exercises
WEEK 4	10	Velocity analysis by the method of instant centers
	12	Acceleration analysis by Vector equation method
WEEK 5	14	Analytical solutions for velocity analysis and acceleration analysis Exercises
	16	Characteristics of planar linkage mechanisms The types of four-bar linkage mechanisms
WEEK 6	18	Grashof criterion Pressure angle and transmission angle
	20	Dead points Quick return characteristics
WEEK 7	22	Design of four-bar linkage mechanisms Exercises
		Midterm exam
WEEK 8	24	Characteristics and classification of cam mechanisms Follower motion curves
	26	Design of plate Cam with translating roller (or knife-edge) follower
WEEK 9	28	Analytical synthesis of pitch curve Pressure angle of cam mechanism
	30	Types of gear mechanisms Fundamentals of engagement of tooth profiles The involute and its properties
WEEK 10	32	Standard involute spur gears
	34	Manufacturing methods of involute profiles Helical gears for parallel shafts(1)
WEEK 11	36	Helical gears for parallel shafts(2)

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		The types of gear trains
	38	The transmission ratios of fixed axes The transmission ratios of elementary epicyclic
WEEK 12	40	The transmission ratios of combined gear trains Exercises
	42	Other mechanisms in common use
WEEK 13	44	Other Mechanisms in Common Use
	46	Balancing Motion and Regulation of Mechanical Systems
WEEK 14	48	Scheme Design of Mechanism System
	50	Quizzes
WEEK 15	56	Experiments
WEEK 16 WEEK 17		Course Design
WEEK 19		Final Exam