

MM 304 Machine Elements II				DEPARTMENT OF MECHANICAL ENGINEERING					
Semester	Methods of Education							Credits	
	Lecture	Recit.	Lab.	Project /Field Study	Homework	Other	Total	Credit	ECTS Credit
6	42	-	-	40	40	22	144	3	5.0
Language	Turkish								
Compulsory / Elective	Compulsory								
Prerequisites	MM 303								
Course Contents	Lubricants and lubrication theory, sliding and rolling bearings. Design of gear drives; spur, helical and bevel gears, spiral and worm gear mechanisms. Design of couplings, clutches and brakes. Design of belt-pulley mechanisms. Design of chain gear mechanisms. Friction drives. Term project.								
Course Objectives	The main objective of the course is to give the students confidence in analyzing and designing of sliding and rolling bearings, spur, helical and bevel gears, spiral and worm gear mechanizms, belt drives and chain mechanisms.								
Learning Outcomes and Competences	At the end of this course, students should be able to recognize the formation and calculation methods of commonly used machine elements. Students able to design machine elements and mechanical systems.								
Textbook and /or Reference	1- Ders Notlar B. Tuğ and N. Gemalmayan, 2- Makina Elemanları M. Akkurt, 3- Bağlama Elemanları M. Gediktaş, 4- Mechanical Eng. Design, J. E. Shigley, 5- Makina Elemanları ve Konstrüksiyon Örnekleri F. C. Babalık, 6- Machine Design, R. L. Norton.								
Assessment Criteria						If any, mark as (x)		Percentage (%)	
	Midterm Exams					X		40	
	Quizzes					X		5	
	Home works					X		5	
	Projects					X		10	
	Term Paper								
	Laboratory Work								
	Other								
Final Exam					X		40		
Instructors	Prof. Bedri TUC, Assist. Prof. Nihat GEMALMAYAN								
Week	Subject								
1	Introduction, friction,lubricants and lubrication theory.								
2	Lubrication theory and sliding bearings								
3	Sliding bearings								
4	Rolling bearings								
5	Spur gears								
6	Spur gears (Project I)								
7	Spur and helical gears								
8	Helical and bevel gears (Midterm Exam I)								
9	Spiral and worm gear mechanisms								
10	Couplings, clutches and brakes								
11	Couplings, clutches and brakes								
12	Belt-drive mechanisms								
13	Belt-drive mechanisms and chain drive mechanisms (Midterm Exam II)								
14	Chain drive mechanisms, friction drives								