

Assessment and Subject Description				
Óbuda University Kandó Kálmán Faculty of Electrical Engineering		Institute of Microelectronics and Technology		
Subject name and code: Precision mechanics, KMEFM1ETND				Credits: 2
Full time, 5th semester		2019/20 1		
Course: Mechatronical engineering				
Responsible:	Dr. Lendvay Marianna PhD	Teaching Staff:	Meszlényi György	
Prerequisites:				
Contact hours per week:	Lecture: 1	Class discussion:0	Lab. hours: 1	Tutorial: -
Assessment and evaluation:	Grade from the test during semester			
Subject description				
<i>Aims:</i> Fine mechanical units are important components of mechatronic installations. The students should acquire the ability to assess fine mechanics basis, products of fine mechanics fastenings and operating elements applied in fine mechanics				
Topics:			Week	Lessons
1st lecture: Definitions and fields of Precision Mechanics, Fastenings with elastic deformation (screw fastenings, key joints, bayonet catch, twist joints, press joints, grouting joints)			1.	2
Lab hours: measurement of geometrical parameters of threads, drawings			2.	2
2nd lecture: Joints with plastic deformation (riveting, flanging, plating joining by curling, lugged joints.). Fastenings with material			3.	2
Lab hours: soldering			4.	2
3th lecture: Operation elements of fine mechanics: springs.			5.	2
Lab hour for calculations of fine mechanical spring parameters			6.	2
National holiday			7.	2
4th lecture: Driving elements: shafts, bearings, edge-type conical bearing			8.	2
Lab hour: different methods of cone angle measurement			9.	2
5th lecture: Driving and transforming elements: gears, gear drives, friction drives, threaded drives, Test about theoretical part			10.	2
Rector's holiday			11.	2
Lab hour: driving elements			12.	2
Correction of fail mid-semester notes			13.	2
Missing lab hours			14.	2
Mid-semester assessment and evaluation				
<ul style="list-style-type: none"> - lectures, class meetings are mandatory. - „pass” test result of lectures materials during the semester („pass” means 50% of the maximal scores) - „pass” result of lab hours, and documentation by protocol, - Mid-semester note will be defined according to the test result and notes of protocols. Test result calculated in 60% - fail tests can be repeated once on 13th, and missing lab hours on 14th - „fail” mid-semester notes can be corrected on the first 10 working days of exam period 				
Suggested material				
Putnoki István: Engineering design, BMF-BGK-55, Bp 2004, 87/2003				
Dr.Elinger István-Dr.Goda Tibor: : Engineering design- Theory and Practice, BMF BGK 3022, Bp,2006				
Bugyás József: Elektromechanikus szerkezetek elemei, BMF KVK-2019, Bp 2003				
1. Dr. Petrik Olivér: Finommechanika, Műszaki Könyvkiadó, Budapest 1974				
2. Hildebrand: Feinmechanische Bauelemente, VEB Verlag Technik, Berlin				
3. Krause, W.: Konstruktionselemente der Feinmechanik, Carl Hauser Verlag, München, 1993.				