

Óbuda University Bánki Donát Faculty of Mechanical and Safety Engineering			Institute of Mechatronics and Vehicle Engineering		
Subject title and code:		Precision Mechanics BMEFME5BNF			Credits: 4
Full-time study		ac. 1 semester year			
The course is available at:		mechatronical engineering			
Supervised by:		Instructors: Lourdes Ruiz S.			
Prerequisite (neptun code):					
Weekly number of lessons					
Lecture: 1	Group seminar:		Lab:		Consultation:
Way of assessment:		Midterm (Written) mark			
Online consultation (in case it's required): lourdes.ruiz@uni-obuda.hu (BBB link)					
Edu. goal:	This course explores the principles of precision mechanics as applied to mechatronic systems, focusing on the design, fabrication, and integration of high-accuracy mechanical components with electronic, control, and sensor systems.				
Schedule					
Education week	Topics				
1.	Introduction, Requirements. About Precision Mechanics				
2.	Fundamentals of Precision Mechanics				
3.	Metrology Components and Mechanisms				
4.	Mechanical Components and Mechanisms				
5.	Sensors for Precison Mechatronics				
6.	Actuators and Motor Control				
7.	Midterm				
8.	Control Systems for Precision Mechatronics				
9.	Integration Challenges				
10.	Microelectromechanical Systems in Mechatronics				
11.	Case Studies and Innovations				
12.	Rectoral Break				
13.	Final Exam				
14.	Retake				
Mid-semester requirements					
Test		Assignment to be submitted		Final Exam	
amount	dates	amount	deadlines	amount	dates
1	21- Oct	1	2- Dec	1	2-Dec, 9 Dec
According to the HKR attendance of group seminars and lab exercises are mandatory.					
Other requirements for participation in sessions not covered by the regulations and restrictions on substitutions:					
Test		Assignment to be submitted		Final Exam	
maximum points available	minimum score required to pass /test	maximum points available	minimum score required to pass / assignment	maximum points available	minimum score required to pass /lab
30points	15points	30points	15points	40points	20points
Total number of points achievable in semester: 100points					

Grading thresholds	satisfactory 40 points and above	average 55 points and above	good 70 points and above	excellent 85 points and above
Other evaluation criteria:				
Receive a signature Tasks have not been completed on time denied entry:				
Required references: Precision Engineering by V.C. Venkatesh, Sudin Izman Presentations in Moodle				
Recommended references:				
Quality assurance methods of the subject:				

Things, that are not included, can be found within the regulations of Óbuda University.