Óbuda University Kandó Kálmán Faculty of Electrical Engineering			Institute of Instrumentation and Automation	
Name & Neptun code of subject: Automatics II. *évközi jegy*			KMAAZ12AND **Credit: 8**	
Subject leader:	Dr. Neszveda József professor		Gecsey László senior teacher	
Weekly hours::		Lecture:		Laboratory: 2

The goal of subject

Setting of work point of linear closed loop control systems. Constant value controlling systems and set point follower controlling systems. Cascade and feed-forward control systems. Stability of multi-loop control systems. A 'Z' transformation. Stabilization and quality of sampled control systems under time and 'Z' domain. Adaptive control systems. Non-linear control systems. Two and three level controllers and their block charts.
Digital controllers and their applications. PLC programing. Technical features of PLC PID controllers block.

Schedule and topics of laboratory subject:	**Date / hours**	
Cascade and feed-forward control overview. Problem solving with teacher leadership.		
Quick overview. Problem solving independently		
Identification from measured points. Optimization. Robust control. Problem solving with teacher leadership.		
Quick overview. Problem solving independently		
Typical non-linearity in a closed loop system. Two and three point controller. Problem solving with teacher leadership.		
Quick overview. Problem solving independently		
PLC programming technique. Problem solving with teacher leadership.		
Quick overview. Problem solving independently		

Semester rating

Visit of exercises is required. All independently problem solving must be fulfilled to a sufficient level. The mark is the average value of the independently problem solving exercises.

Katsuhiko Ogata Modern Control Engineering ISBN 10: 0-13-615673-8
Pearson M. N. Bandyopadhyay, "Control Engineering: Theory and Practice" WEB
M. Sam Fadali: Digital control engineering: analysis and design ISBN 13: 978-0-12-374498-2 Google

Dr. Neszveda József