

Name of the subject: Measurements II.	NEPTUN code: KMXMT2ABNE	Weekly hours: 4 2 lec + 0 gs+ 2 lab	Credit: 4 Req: Assignment
Subject leader: Dr. Károly Bretz		Prerequisites: KMXMT1ABNE	
Description of the subject:			
<p>Measuring non-electrical quantities. Automation of measurements. Measurement and simulation of instruments. Software in measurements. Principle of data acquisition. Measuring frequency and time. Generators II. Oscilloscopes II. Sampling theory. Application of real-time and equivalent sampling theory in sampling oscilloscopes, principle of their operation, specification, application. Analyzers. DC power supplies. Methods of measuring impedances. Bridge methods for measuring impedances. Active measurement of impedances. Digital method to measure impedances. Measuring of electrical power. Directions of development of measuring methods and instruments. Task of transducers, requirements and specification. Application fields of electrically measuring non-electrical quantities.</p> <p>Laboratory: Attaining measuring methods. To get basic skill in electrical measurements, practicing handling measuring instruments. Development of knowledge got in the previous semester in field of measuring methods and instruments. Measurement of electrical and non-electrical quantities. Special measuring methods and instruments. Self-contained measurement (statement of the knowledge got during the semester).</p>			
Literature:			
<p>ALBERT D. HELFRICK-WILLIAM D. COOPER Modern Electronic Instrumentation and Measurement Techniques Prentice-Hall International , Inc ISBN 0-13-593385-4</p> <p>-----</p> <p>LARRY D. Jones- A. FOSTER CHIN Electronic Instruments and Measurements Prentice-Hall Internatinal Editions ISBN 0-13-24885</p> <p>-----</p> <p>Edided by L. Schnell Technology of Electrical Measurements John Wiley & Sons ISBN 0 471 93435 6</p> <p>Remarks:</p>			