UNIVERSITY OF PANNONIA

COURSE DATASHEET

Semester:	2016/17/1
Course:	Materials testing methods
Code:	VEMKAVB252A
Responsible department:	Department of Analytical Chemistry
Department code:	MKKA
Responsible instructor:	dr. Péter Hajós

Course objectives:

An understanding of the principles and techniques of analytical methods

Course content:

Theory 1. Classification of the methods. (qualitative, quantitative methodology, gas, liquid, solid state) 2. Density, viscosity, thermal-and electrical conductance methods, refractometry 3. Electrometric methods(pH measurements, potentiometry, coulometry, electrodeposition) 4. Continuous flow analysis, detectors, sensors 5. Thermoanalytical methods 6. Spectroscopy. UV and visible absorption methods 7. Atom-spectroscopy and IR spectroscopy 8. Electron microscopy 9. X-ray microanalysis, X-ray diffraction methods 10. Errors in quantitative measurements. Precision and accuracy. Practice 11. Trace analysis of metals by atom-spectroscopy 12. Measurements of pH and conductance 13. Surface analysis by scanning electron microscopy

Requirements, evaluation and grading:

Required and recommended readings:

Dr. Inczédy János: Folyamatos és automatikus analízis, Műszaki Könyvkiadó, Bp., 1984 Anyagszerkezeti vizsgálatok lab. gyak., Egyetemi jegyzet, Analitikai Kémia tanszéki munkaközösség, VE, 1992