

# **UNIVERSITY OF PANNONIA**

## COURSE DATASHEET

Semester: 2015/16/1

Course: Chemical analysis lab practice

Code: VEMKKAB232A

**Responsible department:** Department of Analytical Chemistry

**Department code:** MKKA

Responsible instructor: dr. Tamás Pap

## Course objectives:

Understanding of the fundamentals of analytical chemistry practice

#### **Course content:**

1-2. Determination of basicity of water sample. Acid-base titrations. 3-4. Determination of sulfate-ions by gravimetric method. 5. Determination of chloride-ion by argentometric method (Mohr method). 6-7. Detrmination of oxygen consumption of water sample. Permanganometric titration. 8.. Determination of hardness of water sample using komplexometric titration. 9. Instrumental methods: Atom emission spectroscopy (AES) 10. Atom absorption spectrometry (AAS). 11. UV-Vis and Infra-red spectrophotometry. 12. Electroanalytical methods: Potentiometry. Coulometry. 13. Electroanalytical methods: Conductometry. Amperometry. 14. Gaschromatography (GC). Calculation of Kováts-index.

### Requirements, evaluation and grading:

The accomplishment of the allocated measurements.

#### Required and recommended readings:

Dr. Kristóf János – Dr. Horváth Erzsébet: Kémiai analízis I. (Klasszikus és kisműszeres analízis). Veszprémi Egyetemi Kiadó, Veszprém, 2002. (Tankönyv).