

<i>Programme</i>	Chemistry BSc
<i>Course title</i>	Analytical chemistry laboratory practice
<i>Name of lecturer</i>	Ágnes Buvári
<i>Type of course</i>	<u>compulsory</u> , semi-optional, elective
<i>Module</i>	non-chemical, <u>core-chemical</u> , specialized chemical, chemistry teacher
<i>Course code</i>	KA5AN2
<i>Number of credits</i>	4
<i>Year of study</i>	2
<i>Semester</i>	<u>fall</u> , spring
<i>Form of tuition</i>	lectures, practice, <u>laboratory practice</u> , other
<i>Course contents</i>	<p>The common reactions of inorganic ions in aqueous solutions, qualitative identification.</p> <p>Problem solving in connection with analytical procedures and their theoretical bases.</p> <p>Preparation of samples for the analysis.</p> <p>Volumetric methods: preparation of standard solutions, standardization; acid-base titrations; methods based on complex formation and precipitation; redox titrations: measurements with permanganate, chromate, bromate and cerium(IV) standard solutions, iodometry; methods for the analysis of natural waters. Determination of two or more components in the presence of each other. Titrations in non-aqueous solutions.</p> <p>Separations by distillation, ion exchange, precipitation.</p> <p>Instrumental methods of end point detection: conductometry, potentiometry. Potentiometric determination of pH with glass electrode.</p> <p>Application of semi-quantitative fast tests.</p>
<i>Assessment method</i>	written/oral examination, <u>practical course mark</u> , other
<i>Recommended reading</i>	<p>Barcza Lajos: A mennyiségi kémiai analízis gyakorlati kézikönyve (Manual of quantitative chemical analysis), Medicina Kiadó, Budapest, 2005</p> <p>Recommended textbooks:</p> <p>Burger Kálmán: Az analitikai kémia alapjai: Kémiai és műszeres elemzés (Fundamentals of analytical chemistry: Chemical and instrumental methods), Semmelweis Kiadó, 1999</p> <p>Barcza Lajos - Buvári Ágnes: A minőségi kémiai analízis alapjai (Fundamentals of qualitative chemical analysis), (4., átdolgozott kiadás) Medicina Kiadó, Budapest, 1997</p> <p>D.A. Skoog, D.M. West, F.J. Holler: Fundamentals of Analytical Chemistry, 6th ed., Saunders College Publ. (USA), 1992</p>