

<b>Level:</b> bachelor				
<b>Course title:</b> ANALYTICAL CHEMISTRY LAB, IHA-201				
<b>Status:</b> elective				
<b>ECTS:</b> 7				
<b>Requirements:</b> achieved at least 50% of the Analytical Chemistry II practice exercises.				
<b>Learning objectives:</b> <ul style="list-style-type: none"> <li>• To expand understanding of the key theoretical and practical concepts in quantitative chemical analysis.</li> <li>• To enable students for independent planning and conducting experiments and critical evaluation of the obtained results.</li> <li>• To develop ability to apply and modify standard methodology and procedures in solving unfamiliar chemical problems, which is necessary for further chemical education or professional practice.</li> </ul>				
<b>Learning outcomes</b> After successful completion of this course, students are able to: <ul style="list-style-type: none"> <li>• Identify quantitative analytical methods in contemporary environment.</li> <li>• Apply in practice the suitable methodology, knowledge and understanding of qualitative chemical analysis in solving unfamiliar analytical problems.</li> <li>• Organize, plan and conduct experiments in an efficient way.</li> <li>• Interpret the accuracy limits of the obtained experimental results.</li> <li>• Independently conduct quantitative analysis of samples.</li> </ul>				
<b>Syllabus</b> <i>Theoretical instruction:</i> Complex examples of acid-base determination. Possibilities of determination several components in the mixture using chelatometric titration. Selected methods of oxido-reduction and precipitation titrations. Possibilities and modes of gravimetric determinations of several ions in the mixture. Practical problems in analysis of complex materials (work plan, taking samples, calculating analysis results). Analysis of brass and bronze, steel analysis, analysis of silicate and limestone. Analysis of gases.  <i>Practical instruction</i> Laboratory exercises are in accordance with the theoretical syllabus.				
<b>Weekly teaching load</b>				Other: -
Lectures: 1(15)	Exercises: 5(75)	Other forms of teaching: -	Student research: -	