

<b>Title of the course:</b> <b>Chemistry I.</b>	<b>NEPTUN-code:</b> RMXCA1KBNE	<b>Weekly teaching hours:</b> <i>l+cw+lb</i> 2+0+2	<b>Credit:</b> 5 <b>Exam type:</b> e
<b>Course leader:</b> Csiszér Tamás Dr.	<b>Position:</b> senior lecturer	<b>Required preliminary knowledge:</b>	
<b>Curriculum:</b>			
<p>The goal of the subject is to acquire the essential knowledge of the structure, properties and transformations of chemical substances. The subject discusses the characteristics and reactions of the substances through the formation of unique atomic and molecular structures through chemical bonds and interactions to the characterization of homogeneous and heterogeneous sets. It also describes the grouping, production and most important applications of elements and inorganic compounds with students. In practice, students practice solving the most important computational tasks in the field of inorganic chemistry (writing and sorting reaction equations based on oxidation numbers, stoichiometry, concentration of solutions concentration, conversion of concentration units, gas laws).</p>			
<b>Professional competencies:</b>			
<p>Knowledge of general and specific mathematical, natural and social scientific principles, rules, relations, and procedures as required to pursue activities in the special field of environment protection.</p> <p>Comprehensive knowledge of the basic features and interrelations of environmental elements and systems, as well as of the environmentally harmful substances affecting them.</p> <p>Knowledge of the main methods to examine the quantity and quality features of environmental elements and systems, their typical measuring instruments and limitations thereof, as well as methods for the evaluation of data measured.</p> <p>Able to perform basic tests of the quantity and quality characteristics of environmental elements and systems by state-of-the-art measuring instruments; to draw up and implement measurement plans; and to evaluate data.</p> <p>Able to solve tasks of water, soil, air, radiation, and noise protection, as well as of waste treatment and processing at proposal level; to participate in preparing decisions; to perform authority audits; and to take part in the operation of these technologies.</p> <p>Able to reveal deficiencies in the technologies applied and process risks and to initiate mitigation measures after getting familiarized with the technology concerned.</p>			
<b>Literature</b>			
1. A. Pahari, B. Chauhan: Engineering Chemistry, Infinity Science Press LLC, Hingham, Massachusetts, New Delhi, India, 2007			
2. Darrell Ebbing, Steven D. Gammon: General Chemistry, Cengage Learning, 2015, Cengage Learning, Boston, ISBN-13: 978-1305580343; ISBN-10: 1305580346			
3. Peter G. Nelson: Introduction to Inorganic Chemistry, Key ideas and their experimental basis, 2018, 3 edition, Pages: 177, ISBN: 978-87-403-1912-5			