Level: bachelor	
Course title: Learning chemistry - methods and techniques	
Status: elective	
ECTS: 5	
Requirements: none	

Learning objectives

Enabling students to successfully learn chemistry, the specific language of chemistry and specific ways for acquiring chemical knowledge.

Learning outcomes

After successful completion of the course, a student is able to:

1. list and explain specific characteristics of learning chemistry, purpose, learning objectives and outcomes;

2. demonstrate basic chemical literacy – knowledge of qualitative and quantitative meaning of chemical symbols, formulas and equations, nomenclature of organic and inorganic molecules, definitions of basic chemical concepts and applies chemical laws in calculations;

3. actively apply mnemo-techniques in learning chemistry, using visualization, analogy and association;

4. use concept maps in representation of knowledge structures;

5. actively take note form lectures, using Cornell system;

6. represent graphically the results of experimental research and use graphics in calculation of certain parameters;

7. demonstrate the skill of extracting information from primary and secondary sources and organizing them into a developed system of chemical knowledge.

Syllabus

Theoretical instruction:

Basic assumptions for successful learning of chemistry – positive attitude, mathematical and language skills. Mastering chemical language. Application of principles of active learning to studying chemistry. Specific characteristic of reading chemistry textbooks – PQRST method. Spatial visualization of abstract chemical concepts. Mnemo-techniques. Concept maps in learning chemistry. Graphic representation of experimental data and calculations based on graphic representations. Note-taking. Reasons why students fail chemistry exams.

Practical instruction:

Chemical language – practical problems. Chemical calculations. Graphic representation of experimental data. Interpretations of graphic representations. Design of concept maps for general chemistry. Organizing notes according to Cornell system. Prediction of questions in tests.

Weekly teaching load				Other:
Lectures: 2	Exercises: 2	Other forms of teaching:	Student research:	