Course Information Sheet

University: *University of Presov*	
Faculty: *Faculty of Humanities and Natural Sciences*	
Code: *2EKO/VSACH/22*	**Title of Course: General and inorganic chemistry**
Form of Study: *lectures 2 hours per week, seminars and laboratory course 2 hours per week* **Number of contact hours:** **per week:** *2+2* **per level/semester:** lectures 20 hours, *seminars and laboratory course 20 hours, self-study 110 hours* **Method of study:** *full-time study*	
Number of credits: *5*	
Semester: *1.*	
Degree/Level: *1.*	
Prerequisities: -	
Grading Policy (Assessment/Evaluation): Final exam 70 %. Continuous semestral examination during seminars 30 %. *Success criteria (percentage):* *a) A - 100.00 - 90.00%* *b) B - 89.99 - 80.00%* *c) C - 79.99 - 70.00%* *d) D - 69.99 - 60.00%* *e) E - 59.99 - 50.00%* *f) FX - 49.99 and less%.*	
Aims and Objectives: After the completion of this course, students will: *- know and apply the general chemical terminology;* *- know inorganic chemistry nomenclature;* *- be familiar with the equations of chemical reactions;* *- know the basic calculations in chemistry;* *- be familiar with the fundamentals of general and inorganic chemistry.*	
Syllabus/Indicative Content: 1. *General terminology in chemistry, composition of substances.* 2. *Inorganic chemistry nomenclature.* 3. *Basic calculations in chemistry.* 4. *Fundamentals of quantum theory. Atom models. Electron configuration.* 5. *Periodicity – periodic table of elements, general properties of elements.* 6. *Chemical bonds and intermolecular interactions.* 7. *States of matter and phase changes. Structure of substances.* 8. *Fundamentals of thermodynamics and thermochemistry. Fundamentals of chemical kinetics.* 9. *Fundamentals of electrochemistry. Solutions. Chemical equilibrium.* 10. *Physical and chemical properties, occurrence in nature, uses and synthesis of elements and compounds of elements of the 1st and 2nd group.* 11. *Physical and chemical properties, occurrence in nature, uses and synthesis of non-metal elements and compounds of non-metals.* 12. *Physical and chemical properties, occurrence in nature, uses and synthesis of metalloid elements and compounds of metalloids.*	

13. *Physical and chemical properties, occurrence in nature, uses and synthesis of metal elements and compounds of metals.*
14. *Laboratory experiments in chemistry.*

Self-study:

1. Preparation to laboratory course (protocols).
2. Calculations in general and inorganic chemistry.

Suggested readings:

1. Gažo J. a kol.: Všeobecná a anorganická chémia, Alfa, Bratislava 1981.
2. P. Atkins: Fyzikála chémia STU Bratislava 1999
3. Ondrejovič, G.: Anorganická chémia. Bratislava : ALFA, 1993.
4. Fajnor, V., Luptáková, V. a Tatiersky, J.: Cvičenia z anorganickej chémie pre biológov. 3. vyd. Bratislava : Univerzita Komenského, 2006.
5. Žúrková, Ľ. a kol.: Všeobecná chémia. 1. vyd. Bratislava : SPN, 1985.
6. Atkins P.P.W.: General Chemistry, Scientific Amer Incorporated, 1992

Language of Instruction: *slovak*

Other course information:

Grading history:

50 students

A	B	C	D	E	FX
2%	0%	4%	12%	34%	48%

Lecturer/Instructor:

Doc. Ruslan Mariychuk, PhD. - lectures
RNDr. Romana Smolková, PhD. – seminars / laboratory course

Last update: 9. May 2022

Approved by: *uvádza sa meno a priezvisko zamestnanca vysokej školy (štandardne garant študijného programu), ktorý zmenu schválil*