Module name:		**Chemistry**
ECTS:		**3**
Learning effects		Course outcomes:
Knowledge:	1	Knows and understands the structure of matter (atoms, elements, isotopes, bonds creating molecules and compounds)
	2	Knows and understands the main chemical processes: solubility, electrolytical dissociation, osmosis, dialysis
	3	Knows and understands the properties of solutions and colloids
	4	Knows and understands the meaning of ion product of water, pH, buffer
	5	Knows and understands properties of buffers and their role in living organisms
	6	Knows and understands the structure and properties of organic and inorganic compounds
	7	Knows and understands the differences in properties of isomers of organic compounds
Skills:	1	Is able to calculate molar and percentage concentration, calculate the amount of solute in a solution
	2	Is able to calculate the pH of weak and strong acids/bases, pH of buffers, buffer capacity
	3	Is able to identify ions in solutions based on characteristic reactions
	4	Is able to predict the movement of ions and water through a semipermeable membrane in biological systems
	5	Is able to use laboratory equipment, perform qualitative and quantitative analysis of investigated compounds (also in biological material)
Competences:	1	Student is ready to interpret results of qualitative and quantitative chemical analyses
	2	Student is ready to use learned analytical skills in further steps of education, especially in the context of veterinary diagnostics
	3	Student is ready to share his/her knowledge and practical skills with other team members
	4	Student is ready to use his/her knowledge about chemical processes and laboratory skills in further steps of veterinary education.
	5	Student is critical to his/her knowledge and understands the necessity of constant upgrading this knowledge using the most up to date data and publications
Objectives of the module required to obtain learning effects:		The aim of Chemistry course is to teach students about the structure of matter (atomic structure, types of chemical bonds), present topics of general chemistry (e.g. pH, buffers) and introduce students to organic chemistry by presenting the structure and characteristics of organic compounds. During the practical part of the course students are shown the main methods and techniques used in analytical chemistry. Students learn how to work in laboratory and how to function in teams. The knowledge about atoms, bonds in elements and compounds, interactions between chemical compounds and kinetics of chemical reactions is necessary for proper understanding of more advanced mechanisms presented during future courses of biochemistry, pharmacology, toxicology, as well as animal physiology and diagnostics.
Assessment methods:		2 written tests, written exam