

# MEDICAL CHEMISTRY

**1<sup>st</sup> year - DENTISTRY - *winter semester 2017/2018***

## Lectures

MUDr. Vlastimil Kulda (Lectures 1-5)

Doc. MUDr. Jaromír Kotyza, CSc. (Lectures 6-13)

**Monday 11<sup>00</sup> - 12<sup>40</sup> PAV**

General and inorganic chemistry		
1.	2.10.	Introduction to chemistry. Structure of the atom, periodic table. Chemical bonds. Composition of the Earth crust, the atmosphere and the human body.
2.	9.10.	Properties of water. Hydrophobicity and hydrophilicity. Water in human body. Transport across cell membranes. Hydrogen, alkali metals (Li, Na, K).
3.	16.10.	Alkaline earth metals, biological role of calcium. Nitrogen, phosphorus.
4.	23.10.	Sulfur. Oxygen and oxygen radicals. Trace elements (metabolism of iron and copper).
5.	30.10.	Trace elements (iodine and others). Elementary toxicology.
Organic chemistry		
6.	6.11.	Introduction to organic chemistry. Hydrocarbons. Halogen derivatives of hydrocarbons, general anesthetics.
7.	13.11.	Oxygen and nitrogen derivatives of hydrocarbons.
8.	20.11.	Heterocyclic compounds.
9.	27.12.	Saccharides.
10.	4.12.	Lipids.
11.	11.12.	Amino acids.
12.	18.12.	Peptides, proteins.
13.	8.1.	Nucleic acids.

**Textbooks:** General and Inorganic Chemistry for Medical Students  
Basic Organic Chemistry for Medical Students