

Basic Chemistry Course

Lecture & Tutorials - 30 hrs.

No	Topic	Lecture [L]/ Tutorial [T]	Time [h]
1	Elementary particles. Structure of the atom. Periodic table. Basic laws of chemistry. Chemical bonds. Micro- and macroscopic structure of matter. Structure and nomenclature of chemical compounds.	L	5
2	Elementary particles. Structure of the atom. Periodic table. Basic laws of chemistry. Chemical bonds. Micro- and macroscopic structure of matter. Structure and nomenclature of chemical compounds. Solving problems.	T	2
3	Percentage and molar concentration. The concept of chemical equivalent. Mixing solutions. Dilution and solubility. The concept of pH. Definitions acids and bases. Strong and weak acids and bases.	L	5
4	Percentage and molar concentration. The concept of chemical equivalent. Mixing solutions. Dilution and solubility. The concept of pH. Definitions acids and bases. Strong and weak acids and bases. Solving problems.	T	2
5	Principal types of chemical compounds and their properties. Basic types of chemical reactions. Acid-base reactions and redox reactions. Basic concepts and relationships of thermodynamics. Chemical equilibria.	L	5
6	Principal types of chemical compounds and their properties. Basic types of chemical reactions. Acid-base reactions and redox reactions. Basic concepts and relationships of thermodynamics. Chemical equilibria. Solving problems.	T	2
7	Organic compounds. Hydrocarbons, alcohols, aldehydes, ketones, ethers, phenols, carboxylic acids, esters, fats, carbohydrates. Organic compounds containing nitrogen and sulfur.	L	5
8	Organic compounds. Hydrocarbons, alcohols, aldehydes, ketones, ethers, phenols, carboxylic acids, esters, fats, carbohydrates. Organic compounds containing nitrogen and sulfur. Solving problems.	T	2
9	Test.		2