

BMC2 2022/2023 2nd semester Chemistry

Week	Date	Lecture
1	Jan9	No lecture
	Jan12	Basic calculus in chemistry_mathematics
2	Jan16	Calculus in Chemistry. The SI system of measurement. Scientific notations (McMurry pp.34-50)
	Jan19	Symbols of the elements. The atomic theory. Structure of the atom, nuclear arithmetic (McMurry pp.62-66, 69-79)
3	Jan23	Physical and chemical properties. Mixtures and chemical compounds. Chemical formulas. Naming chemical compounds (McMurry pp.66, 82-93, 152-153)
	Jan26	Atomic, molecular and molar mass relationships. Percent composition and empirical/molecular formulas (McMurry pp.79-82, 119-124)
4	Jan30	Chemical equations, stoichiometry (McMurry pp.106-118)
	Feb2	Summary of general chemistry 1
5	Feb6	The electromagnetic spectrum. Atomic spectra. The Bohr model of hydrogen atom. The quantum mechanical model of atom (McMurry pp.183-202)
	Feb9	Electron configurations and the periodic table. Classification of the elements (McMurry pp.202-211, 224-234)
6	Feb13	Chemical bonds: metallic, ionic, and covalent bonds. Electron-dot structures (McMurry pp.927-928, 234-240, 251-277)
	Feb16	VSEPR and valence bond theory (McMurry pp.290-306)
7	Feb20	Intermolecular forces (McMurry pp.306-318)
	Feb23	The gaseous state (McMurry pp.387-411)
8	Feb27	Liquid and solid state, phase changes. The chemistry of water (McMurry pp.439-450, 146-152, 154-155)
	Mar2	Summary of general chemistry 2
9	Mar6	Solutions. Electrolytes and non-electrolytes (McMurry pp.140-145, 155-156, 476-489)
	Mar9	Chemical equilibrium (McMurry pp.582-612)
10	Mar13	Acids and bases 1 (McMurry pp.632-648)
	Mar16	Acids and bases 2 (McMurry pp.649-663)
11	Mar20	Thermochemistry: internal energy and state functions. Enthalpy. Hess's law (McMurry pp.340-363)
	Mar23	Redox reactions. Activity series of the elements. Galvanic cells (McMurry pp.158-166, 785-794, 797-801)
12	Mar27	Summary of general chemistry 3
	Mar30	The main group elements. s-, p-, d-block metals and hydrogen.
13	Apr3	Nonmetals : halogens and noble gases, oxygen and sulfur, nitrogen, phosphorus and carbon
	Apr6	Covalent bonding in organic compounds. Classification of organic compounds. Alkanes: nomenclature and isomerism
14	Apr10	NO LECTURE (Easter)
	Apr13	Reactions of alkanes. Cycloalkanes
15	Apr17	Unsaturated hydrocarbons
	Apr20	Summary of inorganic and organic chemistry 1
16	Apr24	Aromatic compounds 1: aromaticity, classification and nomenclature, reactions
	Apr27	Aromatic compounds 2:
17	May1	NO LECTURE
	May4	Organic halogen compounds
18	May8	Alcohols and phenols
	May11	Ethers. Organic sulphur compounds
19	May15	Aldehydes, ketones and quinones
	May18	Nitrogen containing organic compounds: aliphatic amines
20	May22	Nitrogen containing organic compounds: heterocyclic amines. Amines with biological importance
	May25	Carboxylic acids
21	May29	NO LECTURE
	Jun1	Substituted carboxylic acids. Carboxylic acid derivatives1: esters and amides
22	Jun5	Carboxylic acid derivatives2: halides and anhydrides; salts and detergents
	Jun8	Stereochemistry
23	Jun12	Summary of organic chemistry 3 (8-10 AM)
	Jun15	Orientation