Tárgytematika / Course Description

General and Inorganic Chemistry

MENB_VKTA033

Tárgyfelelős neve / Teacher's name: dr. Nagy Ágnes

Félév / Semester: 2022/23/1

Beszámolási forma / Assesment: Vizsga

Tárgy heti óraszáma / Teaching hours(week): 2/2/0

Tárgy féléves óraszáma / Teaching hours(sem.): 0/0/0

OKTATÁS CÉLJA / AIM OF THE COURSE

The primary objective is for the student to be able to take the specific skills and accomplishments described below and apply, translate, and extrapolate these thought processes to solving problems throughout life.

TANTÁRGY TARTALMA / DESCRIPTION

1.hét Introduction to chemistry, solving problems using scientific approach

2.hét Measurements and calculations: SI units, derived units, scientific notation, uncertainty, reporting measurements, converting one unit to another

3.hét Matter and energy

4.hét Elements, atoms, ions, nomenclature of compounds

5.hét Periodic table

6.hét Atomic mass, mole, molar mass, percent composition and formulas

7.hét Chemical equations

8.hét Reactions

9.hét Modern atomic theory

10.hét The atom and electron configuration, oxidation number

11.hét Chemical bonding, Lewis structures

12.hét Gases, Gas Laws

13.hét Solids

14.hét Liquids and chemistry of water, acid and base

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'S METHOD

The exam is the form of final control for the discipline "General and inorganic chemistry"studying. Students, who completed all types of activities provided by the syllabus, attended all practical classes.

KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

Required reading

1. General and inorganic chemistry / Levitin Ye.Ya. Vedernikova I.A. – Kharkiv: Publishing House of NUPh: Golden Pages, 2009. – 360 p.

2. Raymond Chang. Chemistry (6th Edition). – WCB/McGraw-Hill. – 1998. – 995 p.

3. John McMurry, Robert C. Fay. Chemistry (3rd Edition). – Prentice Hall. – 2001. – 1067 p.

4. David E. Goldberg. Fundamentals of Chemistry (2nd Edition). – WCB/McGraw-Hill. – 1998. – 561 p.

Recommended reading:

1. Rodney J. Sime Physical Chemistry. Methods. Techniques. Experiments. – Saunders College Publishing. – 1990. – 806 p.

2. John McMurry, Robert C. Fay. Chemistry (3rd Edition). – Prentice Hall. – 2001. – 1067 p.

3. David E. Goldberg. Fundamentals of Chemistry (2nd Edition). – WCB/McGraw-Hill. – 1998. – 561 p.

4. Theodore L. Brown, H.Eugene LeMay, Bruce E. Bursten. Chemistry. The Central Science. – Prentice Hall. – 2000. – 1017 p.

5. John Olmsted III, Gregory M. Williams. Chemistry. The Molecular Science. – Mosby. – 1994. – 977 p