



CHM1113 General Chemistry

[60h+60h exercises] 9 credits

This course is taught in the 1st semester

Teacher(s): Jean-Louis Habib Jiwan, Jacques Vandooren (coord.)
Language: French
Level: First cycle

Aims

The aim of those lectures is to introduce the basic concepts of general and inorganic chemistry for freshmen in medical and veterian students.

Main themes

- Atoms and elements.
- Periodic table : Klechlowski's rule, Hund's rule ans Pauli's principle.
- Hybridization of atomic orbitals.
- Covalent-, ionic-, partial covalent bonds, intermolecular forces.
- Molecular geometry.
- Typical reactions of the inorganic chemistry.
- Writing and balancing chemical equations.
- Perfect gas law.
- Elements of chmical thermodynamics : 1st and 2nd law.
- Chemical equilibrium.
- Chemical kinetics.
- Theories of acids ans bases, pH computations.
- Solubility.
- Electrochemistry ans chemical cells.

Content and teaching methods

The lecture content is described ahead. Classes are held orally twice a week (2x2h).

A training period of exercises wih numerical problems is offered every week to groups of students (about 20) in order to improve the understanding of the chemical principles.

Five to six laboratory sessions for pratical are organised with 40 to 50 students altogether.

Tutorials are planned weekly to answer individually specific questions raised by a student.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites: good knowledge in mathematics

Evaluation: written examination with practical exercises following by oral examination with theoretical questions

Support: notes written by teachers, exercise book containing also operating methods for laboratory work

Staff support: teachers and teaching assistants

Other credits in programs

SCA11BA	Première année polyvalente en sciences naturelles - groupe A	(9 credits)	Mandatory
VETE11BA	Première année de bachelier en médecine vétérinaire	(9 credits)	Mandatory