UE General Chemistry - CHI233 -

ECTS
6 crédits

Composante
Département de la licence sciences et technologies (DLST)

- **Langue(s) d'enseignement:** Anglais
- **Ouvert aux étudiants en échange:** Non
- **Code d'export Apogée:** YAX2CH92

Présentation

Description

This course focuses on the molecule and the first notions of reactivity. It deals with hybridisation and representations of molecules by detailing the different classes of isomers, but also mesomerism and the electronic effNumber of credits of groups. A part of the course will also be devoted to coordination complexes, including their stereochemistry, crystal field theory and ligand exchange. Finally, after a quick presentation of the main chemical functions and nomenclature rules, a last chapter will be dedicated to intermolecular interactions and reactivity in chemistry with more precisely the study of substitution and elimination reactions.

The tutorial sessions will be mainly devoted to application exercises in order to use and apply the notions seen in lectures. One practical session will consist of manipulating molecular models.

Heures d'enseignement

Nouvelles heures d'enseignement	CM	22,5h
Nouvelles heures d'enseignement	TD	21h
Nouvelles heures d'enseignement	TP	4h

Pré-requis recommandés

Notions covered in CHI131: structure of matter, electronic configuration, evolution of properties in the periodic table, VSEPR, intermolecular forces.

Compétences visées

- The student will be able to write a redox or acid-base balance equation and calculate the pH of a simple solution (strong acid, strong base and buffer solution).
- Know and know how to apply the theory of the crystalline field to an octahedral or tetrahedral complex.
- Master and apply different representations of molecules (Cram, perspective, Newman, Fischer, topological) and know how to characterise the different types of isomerism.
- Master the basics of reactivity in organic chemistry: electronic effNumber of credits, mechanism writing, nucleophilic substitution and elimination.

Infos pratiques

Contacts

Responsable pédagogique

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Campus

Grenoble - Domaine universitaire