

UE Chemistry and Biochemistry



- > **Teaching language(s):** English
- > **Open to exchange students:** No

Presentation

Description

Course outline

- **Biocatalysis**
 - Basis in Enzymes cofactors and vitamins
 - Cofactors involved in group transfer
 - Cofactors involved in redox reaction
 - Cofactors and chemical origin of life
- **Biological Chemistry of Oxygen**
 - Chemistry of O₂
 - Defense mechanism, detoxification of reactive oxygen species (ROS)
 - Role of ROS in physio-pathology
 - Regulation, sensing mechanism
 - Cellular sources of ROS.

- Membrane Biochemistry
 - Lipids, Membrane and Rafts
 - Membrane proteins: synthesis and topology
 - Membrane proteins and detergent biochemistry
 - Receptors
 - Transporters
 - Vesicular trafficking.
- Biochemistry of viral infection and immunity
 - Membrane fusion
 - Membrane budding
 - Biochemistry of innate factors
- Extracellular Biochemistry: GAGs
 - Extracellulaire matrices
 - Glycosaminoglycans (GAG): biosynthesis and catabolism
 - GAG: biological activities
 - GAG: pathology and applications
- Methods of study
 - Molecular factory characterisation : cryoelectron microscopy
 - Imaging complexes, location and dynamic in cellulo

This module brings strong background (relative to oxidative stress) to the Unit “Experimental Approaches in Biology”

Course parts

UE Chemistry and Biochemistry - CM	Lectures (CM)	30h
UE Chemistry and Biochemistry - TD	Tutorials (TD)	20h

Useful info

Contacts

Program director

Franck Fieschi

✉ franck.fieschi@ibs.fr

Campus

› [Grenoble - Saint-Martin d'Hères](#)