



Summer School: Large Scale Facilities



Niveau d'étude
BAC +5



ECTS
7 crédits



Composante
Faculté des
Sciences



Volume horaire
72h

En bref

- > **Date de début des cours:** 1 sept. 2021
- > **Langue(s) d'enseignement:** Anglais
- > **Méthode d'enseignement:** En présence
- > **Organisation de l'enseignement:** Formation initiale
- > **Forme d'enseignement :** Cours magistral
- > **Ouvert aux étudiants en échange:** Non

- Interaction neutrons/synchrotron radiation with matter
- Diffraction methods and instrumentation for neutron and X-ray (synchrotron) scattering
- Spectroscopy: inelastic neutron scattering and X-ray absorption spectroscopy
- Magnetic neutron scattering
- Presentation of neutron and synchrotron beamlines

Présentation

Description

The objective is to provide second year students master a good introduction in the use of "Large Scale Facilities" for the study and characterization of materials. In particular, we focus on the use of neutron scattering and 3rd generation synchrotron sources for the study of materials. Indeed, to date, the development and optimization of materials often require sophisticated methods, sometimes accessible only at Large Scale Facilities. This presents a major challenge for basic research and applied. The courses, which take place over two consecutive weeks, give basic instruction on the production of neutrons and synchrotron radiation as well as their specific applications and complementarity. The course content is as follows:

- Neutron and synchrotron sources

Objectifs

Getting familiar with neutron and synchrotron sources and applications of large scale facilities in materials science

Pré-requis nécessaires

basics in quantum mechanics, crystallography, physics and chemistry

Contrôle des connaissances

CC intégral

Syllabus



neutron and synchrotron sources, interaction neutrons/
synchrotron radiation with matter, diffraction methods, neutron
spectroscopy, magnetism, X-ray absorption spectroscopy

Informations complémentaires

Contact(s) administratif(s) :

Secrétariat Master Chimie [✉ master-chimie@umontpellier.fr](mailto:master-chimie@umontpellier.fr)

Infos pratiques

Contacts

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Lieu(x)

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