

SC

CHIM2471 Chimie nucléaire

[22.5h+0h exercises] 2.5 credits

This course is taught in the 1st semester

Teacher(s): Jean Ladrière
Language: french
Level: 2nd cycle course

Aims

This course aims to give a sufficient knowledge of the atomic nucleus, stable and instable, to master the theoretical concepts and the applications relative to isotopes, radioactivity and to nuclear reactions. This course is for students in their first and second year of a chemistry licence as well as to do graduated (exact and medical sciences) that want to acquire or complete a formation in radioprotection and applications to ionic rays.

Main themes

This course contains a description of fundamental physical properties of the atomic nucleus allowing an in-depth analysis of the stability or of the different modes of nuclear disintegration of isotopes of all elements. It also describes the basic principles of nuclear reactions aimed at the production of radioelements or energy. Finally, the use of tracers and the measure of their radioactivity are applied in multiple domains (chemistry, biology, medicine, archaeology).

Other credits in programs

ESP31DS/RC	Première année du diplôme d'études spécialisées en santé publique (Contrôle physique en radioprotection)	Mandatory
ESP31DS/RE	Première année du diplôme d'études spécialisées en santé publique (Radioprotection de l'environnement)	Mandatory
ESP31DS/RP	Première année du diplôme d'études spécialisées en santé publique (Physique d'hôpital)	Mandatory
RPR9CE/C	Certificat universitaire en radioprotection et en application des rayonnements ionisants (Contrôle physique en radioprotection)	Mandatory
RPR9CE/R	Certificat universitaire en radioprotection et en application des rayonnements ionisants (Radiopharmacie)	Mandatory