PHYS2365 Nuclear detectors and electronics

[15h] 2 credits

This course is taught in the 2nd semester

Teacher(s): Krzysztof Piotrzkowski
Language: French
Level: Second cycle

Aims

This course is intended for students having a master degree and or preparing a future master degree in the physical sciences. Depending on their previous education and experience, the course either is of the standard lecture type, or involves the conception, realization and/or installation of particular detectors in response to specific and actual needs.

Main themes

Study and setting up nuclear detectors: electronic aspects included, charged particle spectrometry, electronic aspects of signal treatment, applications.

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

Prerequisites:Electronics (course PHYS 1281) and Experimental methods (course PHYS 2270).
Support: reference books.
Written support: A. Korff, Nuclear electronics, Springer, 1972; Nuclear instruments and methods, North-Holland (chosen articles); G.F. Knoll, Nuclear radiation detection, Wiley, 1979; W. Leo, Detection of high energy particles, 1989; K. Kleinknecht, Detectors in high energy physics, 1991.

Other credits in programs

ESP31DS/RC	Première annnée du diplôme d'études spécialisées en santé publique (Contrôle physique en radioprotection)	Mandatory
ESP31DS/RE	Première annnée du diplôme d'études spécialisées en santé publique (Radioprotection de l'environnement)	Mandatory
ESP31DS/RP	Première annnée du diplôme d'études spécialisées en santé publique (Physique d'hôpital)	Mandatory
PHYS22/A	Deuxième licence en sciences physiques (Physique appliquée) (2 credits)	
RPR9CE/C	Certificat universitaire en radioprotection et en application des rayonnements ionisants (Contrôle physique en radioprotection)	Mandatory