




3.00 credits

15.0 h + 15.0 h

Q2

Teacher(s)	Gallez Bernard (coordinator) ;Vander Borgh Thierry ;
Language :	French
Place of the course	Bruxelles Woluwe
Main themes	Introduction to the use of radioisotopes : tracer, applications in vitro (pharmacology, RIA) and in vivo (with comparison to other imaging modalities) Preparation of radiolabelled molecules : nuclear reactions (neutron activation, charged particles, fission, generators), radiochemistry Two examples illustrated from the nuclear reaction, radiochemistry, pharmaceutical conditioning, quality controls, and use in nuclear medicine (+ comparison/ integration of other modalities for the diagnosis assessment) : - $^{99m}\text{Tc}$ generator, diphosphonate kits for the use in bone scintigraphy - $^{18}\text{F}$ -fluorodeoxyglucose and applications in PET oncology
Learning outcomes	<b>At the end of this learning unit, the student is able to :</b> 1 Answer to three fundamental questions : why and how to use a radioactive isotope, and how to prepare it ?
Faculty or entity in charge	CRPR

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Certificat universitaire en radiopharmacie	RFAR9CE	3		
Master [120] in Biomedical Engineering	GBIO2M	3		
Master [120] in Physics	PHYS2M	3		
Certificat universitaire en physique d'hôpital	RPHY9CE	3		