Course title in English	**Nuclear medicine**
Course title in Polish	Medycyna nuklearna
Course code	
Type of course	Lecture
Level of course	PhD
Year of study	1-4
Semester/trimester	1/3/5/7
Number of hours/credits allocated	15/1
Name of lecturer	Nuclear medicine
Objective of the course (expected learning outcomes and competences to be acquired)	*Knowledge:* 1. Knows and understands the basic concept of radiology and nuclear medicine 2. Understand the importance of nuclear medicine in diagnostic and therapeutic research 3. Has knowledge about the use of radioactive isotopes in diagnostic and therapy 4. Known the influence of ionizing radiation on the human body 5. He known the basic standards of radiological protection 6. Has knowledge about modern techniques used in nuclear medicine *Skills*: 1. Recognition and understands the basic concept of nuclear medicine 2. Identifies the most important radioactive isotopes in diagnostic and therapy tests 3. Is able to asses the effects of irradiation of the human body in diagnosis and therapy *4.* Is able to asses what nuclear techniques are used in diagnostic tests and in therapy *Social competence*: 1. Understands the important of contemporary techniques used in nuclear medicine to diagnosis and treat patient

	2. It makes the society aware of the importance of nuclear medicine research in contemporary diagnosis and therapy 3. Be careful in dealing with radioactive substances used in nuclear medicine
Prerequisites	basis of nuclear physic and chemistry as well as environmental radiochemistry
Course contents	The physical basis of nuclear medicine, interaction of ionizing radiation with live matter, radiation protection in radioisotope studies, radioisotopes used in nuclear medicine, radioisotopes generators, radiopharmaceuticals, their preparation and use in nuclear medical diagnosis and cancer therapy, apparatus used in nuclear medicine: scintigraphy, SPECT emission tomography, PET positron emission tomography, NMR nuclear magnetic resonance.
Recommended reading	Skwarzec B., Radiochemistry of the environment and radiological protection (Radiochemia środowiska i ochrona radiologiczna), DJ s.c., Gdańsk, 2002 (in polish) Królicki L., Nuclear medicine (Medycyna nuklearna), Waraw, 1996 (in polish) Szymański M., Nuclear chemistry (Chemia jądrowa, PWN), Warsaw 1996 (in polish) Sobkowski J. i Jelińska-Kaźmierczuk M., Nuclear chemistry (Chemia jądrowa), Adamantan, Warsaw 2006 (in polish)
Teaching methods	Lectures with multimedia presentation
Assessment methods	Oral exam
Language of instruction	Polish