Title of course: Dosimetry, Radiation Health Effects

Credit points: 3

Requirements:

Attendance of at least 75% of the classes. Usable understanding of the basic physical phenomena, the concepts of radiation effects and protection, as well as the regulations and practical solutions is required.

Chance "A" is a computer-based exam. Chance "B" and "C" are oral.

Topics of course:

- The interactions of radiation with matter. Radiation detectors. Dose concepts. Devices for dosimetry.
- Constituents of population dose. The biological effects of radiation. Forms of radiation damage. Principles of nuclear safety. Protection against external radiation sources.
- Preparation for participating in handling nuclear incidents.
- System of dose limits. Requirements for staffing and equipments.
- Documentation, supervision by the authorities. Classification of isotope labs. Handling unsealed radioactive materials.
- Handling radioactive waste; decontamination.

Literature:

Compulsory: Diagnostic Radiology Physics

http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1564webNew-74666420.pdf

Related chapters:

Chapter 1. Fundamentals of Atomic and Nuclear Physics

Chapter 2. Interactions of Radiation with Matter

Chapter 3. Fundamentals of Dosimetry

Chapter 20. Radiation Biology

Chapter 21. Instrumentation for Dosimetry

Chapter 24. Radiation Protection

Person responsible for course: István Hajdu, PhD, Assistant Professor