

## Operating Instructions for X-Ray Facilities

- **The facility will only be operated by a worker qualified to this end**
- **It is compulsory to wear a radiation monitor tag (personal or area)**
- Prior to commencing work, verify:
  - The good working order of the X-Ray machine
  - The good working order of the safety means (warning lights, door closers, protectors and screens)
  - Know where the emergency switch is located
- In the case of a suspicion of a malfunction or the non-functioning of the X-Ray machine, shut down the operation of the machine in the regular manner or by using the emergency switch
- Inform the Radiation Safety Officer regarding any malfunction in the machine
- The name of the Radiation Safety Officer: \_\_\_\_\_
- The telephone number of the Radiation Safety Officer: \_\_\_\_\_

### Signs

Those areas in which work with radiation machinery is being carried out, will be prominently signposted

### Work safety rules when working with an X-Ray machine

1. **The nature of the risk**  
Be aware of the nature of the risk from the source of the radiation that you intend to operate and obtain appropriate training from Safety Services with respect to the desired method of working with the machinery.
2. **Carry out prior planning for the operation required**  
Plan your activities in such a manner that handling the source of the radiation will take as little time as possible.  
Insofar as the work time is shorter - the dose of radiation will be smaller.
3. **Keep your distance!**  
Work at the maximum distance from the source of the radiation.  
Doubling the distance from the source reduces the dose of radiation to one quarter. (The inverse square ratio law).
4. **Use appropriate screening against radiation**  
Paper will block Alpha radiation  
Perspex will block Beta radiation.  
Lead (of an appropriate thickness) will block X-Rays and Gamma rays

5. **Adapt your attire to the type of work**

Wear appropriate radiation monitoring tags, as required, (and consult with the Safety Officer regarding this matter).

6. **Work in accordance with the Safety Laws and Directives**

Work in accordance with the University Safety Procedures

7. **Examine yourself - after completing work.**

Upon completing work, check that the electrical current and voltage to the radiation machine are disconnected.

In the case of detecting a malfunction - immediately report to the Radiation Safety Officer and heed his instructions.

## **Work Procedures for Routine Situations - General**

- Safety arrangements at the facility will ensure that the rate of exposure to external and internal radiation from the sources at work will be restricted such that workers defined as "radiation workers" will not accumulate a dose of radiation, within one year, that exceeds the planned radiation dose, that is, one tenth of the maximum [permitted] annual dose, which is 2 millisieverts (200 millirem)
- The restriction for the rest of the workers is 0.3 millisieverts (30 millirem) per annum.
- All steps will be taken to ensure that the risk of an incident in which there will unauthorized contact with radiation sources (vandalism, theft, etc.), will be as small as possible.