

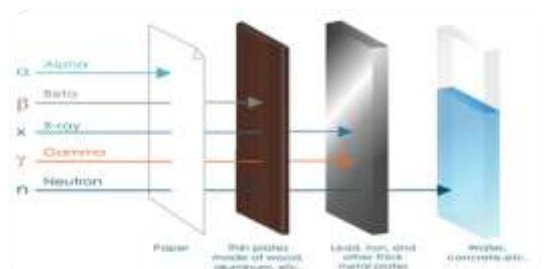
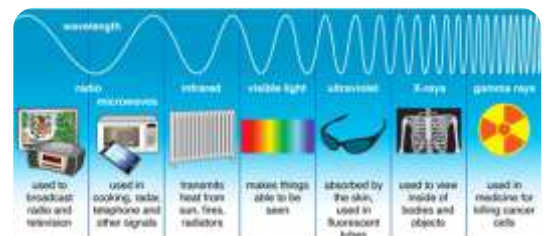


# Radiation Protection

## LECTURE TWO Types of Radiation

Aat. prof. Dr Forat Hamzah

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## LECTURE TWO : Types of Radiation

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### ❖ Radiation & Classification : First classification

Radiation is energy that moves through space or matter at a very high speed. This energy can be in the form of particles or waves.

Radiation can be classified into two categories;

- The first classification is **depends on the ability to ionize**, which can be divided into two types; (i) Ionizing radiation & (ii) Non-ionizing radiation

**Ionization process** : It is the process of gaining or losing an electron from an atom or a molecule, which will turn into a negative or positive charge

**1- Ionizing radiation** : It is the radiation that is carry enough energy to produce ions, that can divided into two types

### ❖ Radiation & Classification : First Classification

- **Directly ionizing radiation**: are charged particles that have enough kinetic energy to produce ionization by collision.

These include electrons, protons, alpha particles (helium nucleus) and beta .....particles high energy electrons).