

Al-Mustaqbal University College
Department of Medical Physics
The Fourth Stage
First Course



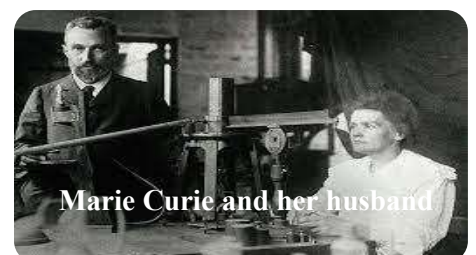
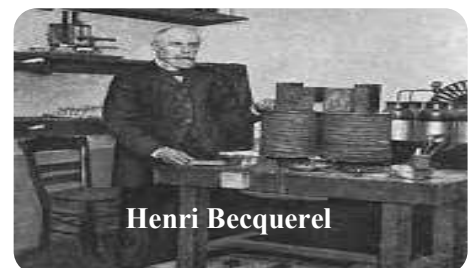
Radiation Protection

LECTURE ONE

Introduction (Radiation)

Aast. prof. Dr Forat Hamzah

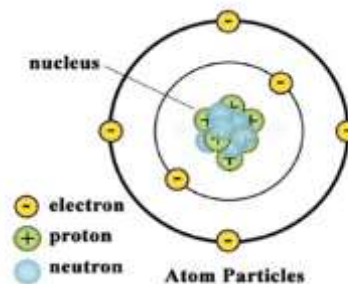
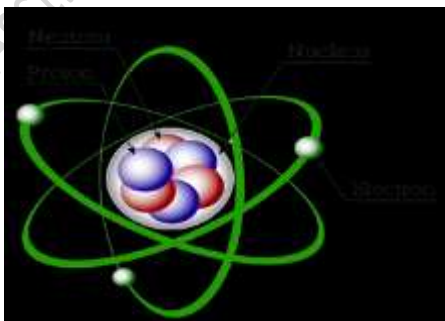
2022-2023



Introduction (Radiation)

❖ Atom Structure

- **An atom** is the smallest unit of matter that forms a chemical element.
- All matter is composed of atoms.
- Every solid, liquid, gas, and plasma is composed of neutral or ionized atoms.
- An atom is composed of a positively charged **nucleus** (+), with a cloud of negatively charged **electrons** (-) surrounding it, bound together by electrostatic force.
- A **nucleus** have a **protons** (positive (+) charge) and **neutron** (neutral charge). So, the nucleus have positive charge
- The electron (negative (-) charge) travels in circular orbits around the nucleus
- Thus, the total electric charge of the atom is therefore zero (the atom is neutral).



Atom Structure