



**Al-Mustaqbal
University College
Medical Physics Department**

Lecture 1 / Optics – Second Stage

**Dr. Aiyah Sabah Noori
M.SC Halah Mohammed
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(Lecture 1)

Lecturer Outline

Optics

Propagation of light

Nature of light

Electromagnetic spectrum

Optics is a branch of physics that deals with the determination of behavior and the properties of light, along with its interactions with the matter and also with the instruments which are used to detect it.

Optics, in a simple manner, is used to describe the behavior of visible light, infrared light, and ultraviolet. Imaging is done with the help of a system called an image forming an optical system.

What is light ?

*Light, known as **visible light, is electromagnetic radiation** that falls within the portion of the electromagnetic spectrum that the human eye can perceive. Visible light is typically defined as having wavelengths in the **400–700 nm** range, which lies between infrared (which has longer wavelengths) and ultraviolet (which has shorter wavelengths) (with shorter wavelengths).*