



**Al-Mustaqbal  
University College**

**Medical Physics Department**

**Lecture 3. Optics / second stage**

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### **(Lecture 3)**

#### ***Lecture Outline***

#### ***Light***

#### ***Interaction of Light with Matter***

#### ***Reflection and Refraction of Light***

#### ***Critical angle for total internal reflection***

#### ***Dispersion of Light***

**Light** is electromagnetic radiation that has properties of waves. The electromagnetic spectrum can be divided into several bands based on the wavelength. As we have discussed before, visible light represents a narrow group of wavelengths between about 380 nm and 730 nm

Our eyes interpret these wavelengths as different colors. **If only a single wavelength or limited range of wavelengths are present and enter our eyes, they are interpreted as a certain color. If a single wavelength is present we say that we have monochromatic light. If all wavelengths of visible light are present, our eyes interpret this as white light. If no wavelengths in the visible range are present, we interpret this as dark.**