DIVISIONS AND BRANCHES OF PHYSICS

CLASSICAL PHYSICS

Before 20th Century

- **Mechanics** deals with the behavior of objects and systems in response to various forces.
- **Acoustics** studies the production and properties of sound.
- **Thermodynamics** is the study of heat and other forms of energy, and of the conversion of energy from one form to another.
- **Electromagnetism** is the branch of science concerned with the forces that occur between electrically charged particles.
- **Optics** is the study of the nature and behavior of light.

MODERN PHYSICS

20TH Century +

- **Low-Temperature physics** is a science concerned with the production and maintenance of temperatures much below normal, down to almost absolute zero, and with various phenomena that occur only at such temperatures.
- **Quantum physics** includes various areas of study based on quantum theory, which deals with matter and electromagnetic radiation, and the interactions between them.
- **Solid-state physics**, also called condensed-matter physics, examines the physical properties of solid materials.
- **Condensed matter physics** is a branch of physics that deals with the physical properties of condensed phases of matter.
- **Relativistic Physics** is the physical theory of space and time developed by Albert Einstein, based on the postulates that all the laws of physics are equally valid in all frames of reference moving at a uniform velocity and that the speed of light from a uniformly moving source is always the same, regardless of how fast or slow the source or its observer is moving.
- **Atomic and Nuclear physics** is concerned with the structure and properties of the atomic nucleus, and with nuclear reactions and their applications.
- **Plasma physics** is concerned with the study of highly ionized gases- that is, gases that have been separated into positively and negatively charged particles.