

## Modern physics1

**Name of Lecturer: Asst. Prof. Dr.Nabil J.AL-Bahnam**

### **References:**

- Demtröder, Wolfgang , Atoms, Molecules and Photons An Introduction to Atomic-, Molecular- and Quantum Physics,2010.
- Arthur Beiser - Concepts of Modern Physics: 5th (fifth) Edition ,2002.
- Henry Semat, John R. Albright , Introduction to Atomic and Nuclear Physics , 1972 .

## Delivery Plan (Weekly Syllabus)

	Material Covered
<b>Week 1</b>	Relativity
<b>Week 2</b>	Wave properties of particles
<b>Week 3</b>	de Broglie wave ,wave and group velocity
<b>Week 4</b>	uncertainty principle ,wave particle duality
<b>Week 5</b>	Particle properties of waves
<b>Week 6</b>	photoelectric effect ,x-ray ,x-ray spectra
<b>Week 7</b>	Moseley relation ,x-ray diffraction
<b>Week 8</b>	Compton effect ,pair production , attenuation ray
<b>Week 9</b>	Atomic models:
<b>Week 10</b>	Thomson model
<b>Week 11</b>	Rutherford model
<b>Week 12</b>	Bohr theory
<b>Week 13</b>	Bohr's corresponding principle
<b>Week 14</b>	Black body radiation
<b>Week 15</b>	Short Exam
<b>Week 16</b>	<b>Preparatory week before the Final Exam</b>

# Questions about modern physics