

Al-Nahrain University
College of Science
Department of Physics

Subject: Physics of Waves
Year: Second year / 2nd semester

Week	Topic Details
1	The basic mass-spring system
2	Electromagnetic oscillation
3	Damped oscillation , forced oscillation
4	Energy tossing in mechanical oscillation
5	Waves, types of waves , Simple Harmonic Motion
6	Lissajous Figures
7	Superposition of two waves
8	The equation of progressive waves
9	Phase, group velocities
10	Wave differential equation, partial differential equation
11	Transverse wave in a string
12	Stationary waves (or standing waves)
13	Sound waves
14	Sound waves in a liquids
15	Sound waves in gases
16	Doppler effect of sound waves
17	Problems